SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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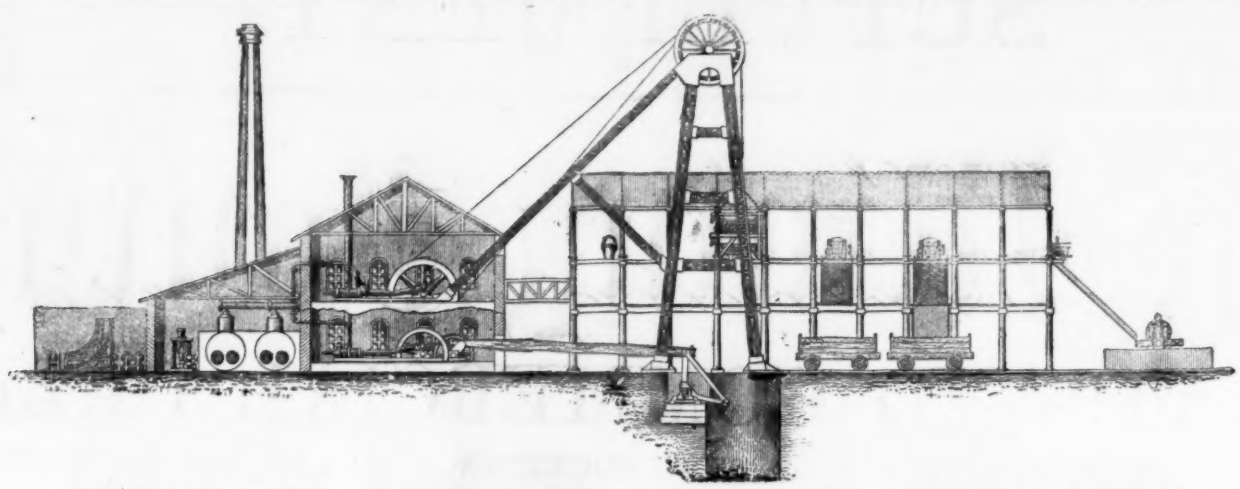

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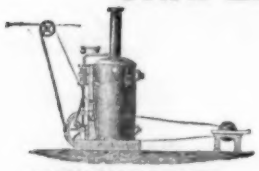
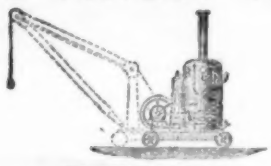


STATIONARY ENGINE. No Building required.



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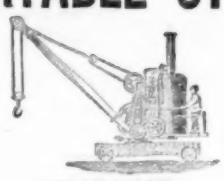

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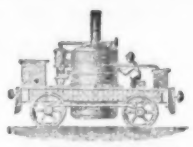

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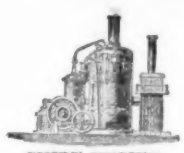

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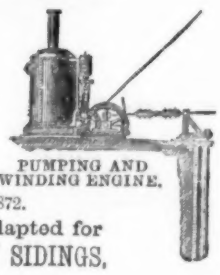

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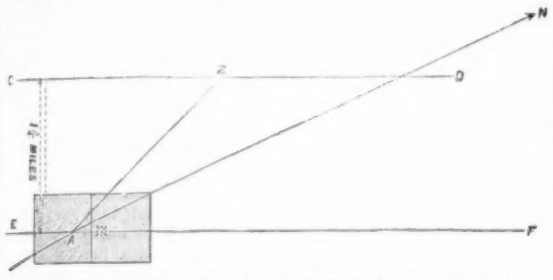
INDIAN GOLD MINES—THE MYSORE REEFS.

SIR,—I am indebted to someone unknown to me for a copy of the "private and confidential" circular, dated Christmas, 1881, of the report of the directors of the Great Southern Mysore Gold Mining Company (Limited). As I am manager of the Mysore Reefs Gold Mining Company, the property of which joins that of the Great Southern, I naturally felt some anxiety to know if the large shaft sunk by Capt. C. Bray, and referred to on pages 2 and 3 of that report, was on any line of supposed reef that might be traced through our ground. Of all the ten mines on this Colar gold field the Mysore Reefs ground is the only one that presents an outcrop of any size that may be traced on the surface for a considerable distance.

Seeing that mention is made several times in this "private and confidential" report "that the said shaft is too far east," and "that Mr. Bray was sinking the shaft entirely away from the run of the reefs," and "that Mr. Bell-Davies, the representative of Messrs. John Taylor and Sons, had telegraphed to that firm, under date of Nov. 10—'Great Southern Mysore property, on run best. Colar Mysore lodes, ground untried; shafts too far east.'"—I determined to test the truth of the statements, thinking it might lead me on some of our ground yet untried. I first tried it with an ordinary pocket compass; but, feeling that I ought not to trust to that instrument, I this day took my theodolite. I first took the bearings of our outcrop at places 200 yards apart. The observation gave the direction at 24° east of north. I then continued on this line northwards, and I found that it crossed the centre of this large shaft, that is said by Mr. Bell-Davies on the third page of this "private and confidential" report "to be a quarter of a mile east from the course of the lodes." I am not writing this to defend Capt. Bray's actions, for he is quite able to do that himself, but that the truth may be known. That there might be no mistake about my observations I took one of my European staff with me, who tested every sight and the compass bearings.

Great importance is evidently attached to a line of trial "pits 22 fms. apart at right angles to the run of the lodes," which Mr. Bell-Davies has advised the present manager (Dr. Atcherley) to sink, and which he intends driving east and west. I thought he was already too far east. I have seen each of these eleven pits, and have examined the ground on which they are sunk, and from all I can trace of any indication even of quartz—to say nothing of gold—I should think it just as likely to find gold by sinking a like number of pits along Cheapside, E.C., as to hope to find gold there. I say nothing about where shafts ought to be sunk; but I cannot close this (if you will allow me space) without a few words as to the "tracing the run of lodes from Colar and Mysore into this sett." A few weeks ago when General Beresford was here, and told me of these lodes (if they exist) running through the Great Southern into our sett, I pointed out to him how impossible it was that they could do so, for a line along them would go at least one-third to one-half a mile to the westward of the western limit of our setts. So that there might be no doubt on this subject I went this afternoon to Colar Camp. Finding our lode so be running in the direction of 24° east of north I



EXPLANATION.—Mysore Reefs, diagonal shading; Great Southern Mysore, vertical shading; *A*, Mysore N. (or "at," manuscript illegible), outcrop; *Z*, Colar south pit; *, large shaft sunk by Capt. C. Bray; *A*, *Z*, course steered by H. Moon; *C*, *D*, course of line of sinking on Colar sett, supposed to run into Mysore sett; *E*, *F*, course of outcrop on Mysore Reefs ground running through large shaft, *, sunk by Capt. C. Bray. The arrow indicates magnetic north, and the scale is ½ in. = 1 mile.

started from our northern outcrop, steering by compass all the way 20° west of north. This course in a walk of 50 minutes brought me to the first or most southerly pit in the Colar sett. I leave to those interested in it to trace the distance in a parallel line between the two lodes, as the Colar (taking a line of workings) gave exactly the same run, 24° east of north, as I find on our own sett.

The report of the running of the Colar and Mysore lodes into the Great Southern sett is in his (Mr. Bell-Davies') letter of Nov. 20, on page 3 of the "private and confidential" report of the directors of the Great Southern Mysore Gold Mining Company (Limited), Christmas, 1881.

It is just as impossible that Piccadilly and Oxford-street should ever meet by a continuation of their parallel lines as that the so said lodes of Mysore and Colar Companies (as now being worked) should ever run into either of the Great Southern or Mysore Reefs setts. Since writing the above I have plotted the survey that I have mentioned, and I find that the distance between the parallels of the Colar Mysore lode and that in the Mysore Reefs, which I have named as having traced by the theodolite straight to the large shaft sunk by Capt. Bray is upwards of one mile and a-half. I hope the concoctors of the "private and confidential" report will draw all the comfort they can from this statement, which I am prepared to maintain against all or any contradictions. HENRY MOON, M.E.,
Manager of the Mysore Reefs Gold Mining Company (Limited).
Kolar-road (Madras Presidency), Jan. 18.

INDIAN GOLD MINES.

SIR,—I think your correspondents overlook one argument in favour of the genuineness of the above undertakings—it is the risk that the promoters run if the accounts given us by the mining experts have been "cooked up" for the British market. These undertakings owe their origin entirely to the accounts of the experts, and not the capacity of the general public to judge of their merits, of which it can form no idea that is not based upon the credibility of the promoters and engineers. If those accounts are true the profits of the undertakings will be immense; if false, the means of obtaining legal justice and reparation lie in our hands. As a shareholder in two of these companies (and as expressing the opinion of very many fellow-shareholders) I would willingly, in case of our hopes turning out a mirage, contribute towards the obtaining justice on the promoters.—*Liverpool, Feb.* 14. ——— JUSTITIA.

INDIAN GOLD MINES—MYSORE DISTRICT.

SIR,—Since my other letter to you by this mail the Madras Mail, of Jan. 21, has just published the subjoined information respecting these mines, which I hasten to send you for the information of my co-shareholders:—

A perfectly reliable correspondent, who has visited the Kolar Geld Fields, Mysore, this week, writes to us as follows:—"I have seen nothing at Kolar to alter the opinion I have always held—that if the mines are well managed they will pay. The Mysore Company are merely driving and getting ore ready. They will, the manager says, have plenty of water. I am pretty sure that they will not crush anything until the new captain comes—say two months from this. Mr. Bray at Balaghat is working steadily at his shaft, and is now 100 ft. down; when he goes 30 ft. deeper he will drive so as to prove the lode, and then go down 200 ft. We saw gold washed out of the mullock there. The water bothers them a good deal. Mr. Plumer, at Nundidroog, is working steadily, without attempting to lift ore. At the Ooregum Mine nothing whatever is being done, but we saw a good wash out of mullock there. Mr. St. Steven is very hopeful, and my own opinion is that, if properly managed, it is the richest mine there. I heard that they were doing well at Kaiser-i-Hind, and also at Kolar."

It is evident that the directors of all these mines have sent out inexperienced men for their development, and that shareholders may have to wait another year for the serious errors of the past to be remedied. I would again urge—nay, entreat—my co-shareholders, especially in the Ooregum Mines, amongst the many questions of their management imperatively requiring elucidation, to demand also from the directors an explicit explanation of the delay in this mine commencing crushing. You will observe that the Madras Mail's correspondent corroborates the opinion I have already expressed in your columns that the Ooregum is by far the richest of these mines.
Madras, Jan. 23. ——— INDIAN SHAREHOLDER.

MYSORE DISTRICT, AND MR. BRAY.

SIR,—The *Mining Journal* of Dec. 24 has just reached me. It gives a letter from the Great Southern Mysore Gold Mine respecting statements recently made by Mr. Bray in regard to these mines generally. As respects the truth of these statements it would be interesting to hear Mr. Bray's replies to the following questions:—

1.—In the early days of the Ooregum Mine was Mr. Bray not the coadjutor of a Mr. Munday, an Australian miner, and did not Mr. Bray and Mr. Munday obtain 40½ ozs of gold from 17 tons quartz?

2.—Did not Mr. Munday at that period admit there was gold in the reef, but that it would not pay to work it?

3.—Did not Mr. Bray differ from Mr. Munday in that opinion, and remark "that in Australia working men would put their money into the concern, and work it up?"

4.—Was not Mr. Bray when the present Ooregum Company was formed recalled from Australia, where he was then the manager of the Maudlin Tribute Company, and did he not again take the management of the Ooregum Mine on a salary of 30*l.* per mensum and 2 per cent. on the profits?

5.—Did not Prof. Vazie Symons, in his report on the Ooregum Mines, say he was "much assisted by Mr. Thos. Bray, the energetic and thoroughly practical and experienced manager of the works?"

6.—Did not that report of Prof. Symons say that "the Ooregum Mine can scarcely be called a speculation, as the precious metal has for generations been extracted in quantity by the rudest appliances;" also "by the presence of gold in payable quantities on the surface;" "by the proved richness of the auriferous reefs worked by the present lessee" [Mr. Bray was then the manager]; "by the lodes being indubitably true fissure veins;" and did not Mr. Bray assent to these opinions of Prof. Vazie Symons?

7.—Did not Mr. Bray say to Prof. Vazie Symons, as given in the report—"You have done well to have purchased the company's property, as I have worked there before, and know the soil?

8.—And is not Mr. Bray now the manager of a Mysore District Mine, locally promoted, called Balaghat, the shares of which are 350 rs. each?

I am unable to say why Mr. Bray left the Ooregum Mine, and why with his present opinion of the Mysore district mines he is still the manager of one of them. I dare say we shall be told something of the cause at the coming Ooregum meeting; but it is incumbent on Mr. Bray to say whether the foregoing facts, which Mr. Bray cannot controvert, are not very inconsistent with his present opinion, and to explain why he has concealed this opinion from the public until now.
——— INDIAN SHAREHOLDER.

MYSORE-COLAR GOLD (?) FIELD.

SIR,—Since I wrote you last I have been set to work in a dark corner, and I have heard some very startling revelations from this field, which I now disclose to you. I have heard that the late manager of the Ooregum Mine has been paid his salary and expenses up to the end of January, and that he received a substantial present for wrongful dismissal. I have heard that the directors of the Ooregum Company have been closely questioned concerning the 40 ozs. of gold which was reported as the result of the crushing in December, 1881. I have heard that one of the men employed at the Ooregum Mine during that crushing had stated before two of the managers of the mines in the district that there was no gold got from the quartz then crushed, but that they did really get a little gold from the mullock. I have heard that the late manager of the Ooregum Mine, as well as the mining captain, had given a most decided opinion as to the worthlessness of the mine, and that a grand conference of parties interested had been held in India to try and upset their statements; but I also hear that the opinions by them expressed are on too sure a foundation to be upset by any fair means that can be brought to bear against them. I have heard the shafts in Ooregum are being sunk in rock as "hard as thunder" (I suppose this term is derived from the fact of the rock being hard trap or basalt, and to define its hardness, density, and volcanic origin in a few words), and that the trial shafts which have been sunk have definitely proved that no reefs exist on the property, and that the "surface slides and disintegration so common in tropical countries," as described by Mr. Bell Davies in his report, are merely the effusions of his own bewildered brain. I have also heard that the directors of the Ooregum—like those of the Great Southern Mysore—have had enough said to them long enough ago to shut up a dozen mines. I have heard that the reefs have not been found in the drivings as they expected at the Nundydroog Mine. I have heard that the reefs so much lauded in the Mysore Mine have been proved beyond existence, and that the result of the crushing has turned out to be *nil*, and that the manager—Capt. Rogers—had been superseded, and that he, as well as the other members of the staff, are not so sanguine as they formerly were, and now they all think that the next crushing, which is to commence immediately, is expected to be the final wind-up of the whole affair. I have also heard that Capt. Rogers was offered the management of the Madras Mine, but had declined. I have heard that the quartz was worthless in the Colar Mine, but that they also have found a little gold in the mullock, and that the manager had received orders to commence crushing, but that he is not very sanguine. I have also heard that the mining operations now being carried on at the Great Southern Mysore Mine beats all practical experience hollow. I have heard that at the Mysore Reefs Mine they had found a bottom to the pit, from which the manager had extracted over 100 tons of quartz, and that the assays out there gave no trace of gold, while the assays home here, as I have heard, showed only the slightest traces, and that now the manager and directors are pushing one another as to what they propose doing. I have also heard that at the Madras Mine driving is still going on in the hard dolorite rock, without any signs of a reef. I have also heard that one of the concessionaires, who is also a director of some of the companies, has been confidentially advised that he is being duped over the whole matter, and that he had better make a clean breast of it, clear out of it altogether, and save his honour and as much money as possible at the same time. This is all the news I have to give you at this time, but as I am still in working order I shall be able to give you some more in a future letter.
——— PHOTOPHONE.

THE GREAT SOUTHERN MYSORE GOLD MINING COMPANY

SIR,—After the disclosures made by Capt. C. F. Bray as to the transactions of the directors of this company and the very significant speech of Mr. Justice Manisty in the High Court of Justice, Chancery Division, in the case of Gibb *v.* this Company and Others, it would seem to be time for the shareholders to be on the *qui vive* as to the disposition of the money they have already paid in, and what they may be liable to pay on the shares allotted to them.

At the statutory meeting of this company, held in April, 1881, the report of which I have now before me, the Chairman said—"Gentlemen, your board feel that the very element of success is confidence, and, therefore, they intend always to give you the fullest information regarding the status of the concern. They wish that you should know everything that is taking place, and has taken place, and that is about to take place, and, moreover, when special news comes from the property there shall be no delay in sending it to you. If the news is very important it will be sent to you by special circular, and if an ordinary report it will be published in the mining papers." Now, Sir, I ask, when the very special report—one at least very important to the shareholders—which Capt. Bray sent to the directors on June 11, 1881, and only a week or two since published in the *Mining Journal*, was received, why did the directors not acquaint the shareholders of that report? Why was Capt. Bray's dismisal so quietly passed over by the Chairman and directors at the meeting on Jan. 31 last? Does it not very plainly show that the whole fabric is based on an insecure foundation both at home and in India? Compare the methods of working condemned and approved of by Mr. Bell Davies in his reports on this company's claim, and that of the Ooregum Company's mine, and it is very evident that Mr. Bell Davies had either forgotten what he had written in one case, or the only other conclusion that can be arrived at is that Mr. Bell Davies knows nothing whatever of the matter on which he is set up as an authority, and that the only object in his being sent to inspect the mines in this locality was for him to condemn all that was being done there so as to administer a stimulant to the surely dying—ere yet it is born—so-called gold mining industry of the Mysore Colar district, so that its lingering existence may miserably drag on for a short time longer in the vain hope that the parties interested may possibly be able to sell the enormous amount of shares with which they saddled themselves in order to float the different companies in the formation of which they had a grand monetary interest. It is nearly time that we had some legislation that would prevent companies issuing unverified prospectuses, and unprincipled promoters from filling their pockets with the hard earned and sadly needed savings of unwary investors.
——— RESPICE FINEM.

GREAT SOUTHERN MYSORE GOLD MINING COMPANY.

SIR,—In the supplement to last week's *Mining Journal* I notice a letter, subscribed "Agricola," criticising some remarks said to have been made by Mr. Bell Davies at a meeting held on Jan. 31 relative to the above-named mine. It would appear from said letter that Mr. Bell Davies spoke depreciatingly of Capt. Bray, the late manager of the mine, intimating that he proved himself to be neither a practical, competent, or economical miner, and in terms equally strong eulogised the proceedings, the experience, skill, and mining ability of Dr. Atcherley, the present manager. According to Mr. Bell Davies, Dr. Atcherley, the present manager, had put in a series of shafts at right angles to the course of the lodes." This appears to have been one of the acts of Dr. Atcherley so approvingly spoken of by Mr. Bell Davies, although in the annals of mining such an operation was never heard of unless performed by some mere pupil or by some one equally destitute of any knowledge of mining. I am not at all surprised to hear of such a novel method of mining pursued by one with so little mining experience as the present manager, nor that it should be panegyrised by Mr. Bell Davies, as, no doubt, with regard to mining experience, both these gentlemen stand upon a par. I do not personally know Captain Bray, but I do know that he is a practical miner. Will, then, Mr. Bell Davies kindly tell the public where he obtained his mining knowledge so as to be enabled to form anything like a just estimate of the mining abilities of Capt. Bray or of those of any other miner, and also whether he (Mr. Bell Davies) ever saw or heard of any other practical miner who saw and reported on any Indian gold mine since the setting in of the gold mania? I would beg to ask the two gentlemen to whom I have alluded whether either of them is skilled in the phenomena of mining, and also who are they who would, or who do, invest upon their reports of a mine, or in one subject to their control or management? JOHN LEAN.
London, Feb. 15.

GREAT SOUTHERN MYSORE GOLD MINING COMPANY.

SIR,—With reference to the ordinary general meeting of this company, as reported in the Journal of Feb. 4, I again ask the favour of a little space for a few remarks thereon. The Chairman stated—"With regard to the operations which had been carried on at the mine, he must begin by expressing to the shareholders the acute disappointment felt by the directors at the failure of the late manager in India, Capt. Bray, to appreciate or understand the characteristics of the gold field, and further his dogged adherence to his own opinions, and his refusal to take advice from those longer in the field than himself. However, the past could not be undone, and he thought it better to leave that part of the subject and turn to the present and the future, and inform the shareholders concerning the operations which had been undertaken by their present manager—Dr. Atcherley—and his opinion, and the opinion of other experts who had visited the Mysore gold field." Now, Sir, that I failed to "appreciate the existence of the gold field," is all bunkum, because there is not the least evidence of a gold field being there to appreciate, that I failed to respond to the heartfelt desires of the directors by not sending favourable reports I own. Had there been a gold field there, or even anything that promised such a thing, I should not have failed to appreciate it, and although I did make a remittance of gold to the directors—the result of washing several scores of samples, and which could barely be seen by the naked eye, but might be sworn to by a powerful magnifier—it does not prove the existence of a gold field. By-the-bye, I would ask if the directors sold the gold and pocketed the money? as I have never seen mention of it in any reports, neither did the secretary acknowledge receipt of it to me, but I know the letter which contained it was received. I certainly did adhere doggedly to my opinion, because there was not a single redeeming feature in the whole field on which any other opinion could be based. I deny *in toto* the allegation that I refused to consult with or take the advice of those longer in the field than myself. I wrote a strong remonstrance to the directors for insulting my practical experience as a miner, to say nothing of my theoretical knowledge of mining, by ordering me to consult with one whose only experience of mining consists of a few months' residence at the Cape diamond mines, and his being a month or two longer than myself on the Colar gold (?) field, and one who has not had even the theoretical training of a mining school to recommend him to the post he occupied. Who are the other experts who have visited these mines? I know of no one who have either practical or theoretical experience to recommend them, and I am positive that no one who, having either, and desired to win or keep a honest reputation, would report favourably on any portion of the field. The fact that Mr. Bell Davies is the accredited agent of Messrs. John Taylor and Sons is no guarantee that his reports are in any measure to be relied on. Messrs. John Taylor and Sons' inspectors sometimes make some very absurd mistakes, and that they are sometimes sold even by planted mines, the Mineral Hill alone is quite sufficient to quote, and perhaps Mr. Richard Taylor may now remember what I told him about that mine, before they commenced operations there, and how what I told him was verified by actual results. I might quote many others where their representatives have made mistakes. Have Mr. Bell Davies' suggestions and predictions been carried out in the Chontales Mine? By the reports published from time to time I gather that his recommendations have been carried out, but as yet failure and disappointment only have been the result of all operations based on his opinion.

Mr. Bell Davies states, that in the Mysore Company's mine at least two lodes had been proved, one of them for "nearly three-quarters of a mile." He had no need to have gone to India to make such a statement as that, as the statement does not prove it to be a fact. He might have gone a little farther by stating that the lodes had been proved to extend 30 miles, and he would have been equally as much within the bounds of truth, because the whole country, far exceeding this distance, is, as might be said, literally strewed with quartz outcrops. These outcrops are of varying thicknesses and lengths, and extend in varying depths into the country rock; imaginary slides only are to found, and by chance you come on another band of quartz with the same result; these patches of quartz are no more lodes than are the felspar foliations in a piece of typical gneiss; in fact, they may be said to exist under similar conditions, each in its peculiar geological formation. In speaking of the neighbourhood of Nancarrow's shaft, he states—"There were at this shaft several small outcrops of quartz; but in this gold field, parallel with the reefs which carry the gold, there is a band of reefs running to the east of the others, and quite of a different character. They carry sulphurets, the quartz is very white, and is quite different in appearance to the blue quartz which in this gold field carries the gold. Those reefs had not been worked upon by the ancients, who had evidently found that it would not pay to do so, nor had subsequent workers found payable gold there. Therefore, it would have been better if their late manager had ignored the workings which were of this character, and had gone west, and tried the ground for the other class of reefs. Their present manager had put in a series of shafts at right angles to the course of the lodes, and he proposed to cross-cut from these shafts, and by that means would thoroughly

prove the ground." In the neighbourhood of Nancarrow shaft there are several small outcrops, but Mr. Bell Davies has purposely ignored the existence close to the shaft of the large outcrop which is more extensive in size and length, and shows more quartz than any other 20 outcrops on the whole claim put together, and which in appearance bears a most striking resemblance to the outcrops of the so-called champion lode in the other claims, and which is the largest outcrop but one on the whole field; all the other outcrops are very insignificant compared to this. Where or on what part of the field are the reefs carrying gold? The crushing at the Mysore Mine have not proved them to exist there, neither had they been proved to exist on any other mine when I left the field, and I think I may most positively assert that they never will be found to pay for working.

Again, there are no particular bands of reefs on the whole field, the outcrops being scattered all over, and running in all directions, at all bearings or points of the compass. The quartz is of an infinite variety of shades of colour, inasmuch as it is a very hard matter to find two pieces of quartz, from two different outcrops, which resemble each other. As to the quartz carrying sulphurets, there is not a bit of anything of the kind to be found on this company's claim; and the only place I ever saw a bit of anything of the kind was a few small specks of copper pyrites which the manager of the Mysore Reefs brought to show me, thinking it was gold. On some parts of the field—but not on the Great Southern Mysore claim—there appears to be some evidence of prospecting having been done in former days but there is not the least evidence to prove that ever the gold found paid for the labour expended in searching for it; facts rather tend to prove the contrary. In the history of Mysore and Koorg it is stated that, during the last century the Ruler of Mysore tried to find gold on the field, but soon abandoned the scheme, and twice during the present century attempts had been made to find gold in the same locality, but operations soon ceased after the trials had proved that gold was too scarce to pay even the natives for working it. In the Gazetteer of India it is stated that, "In the alluvium covering a tract of country near Betmangalum"—Betmangalum is a village two or three miles from the Colar Mines—"in Kolar, gold is found in the form of small fragments and dust, but the auriferous strata have not, on being worked, proved remunerative." In another work treating of the geology of the district it is stated—I give it from memory, not having the work at present by me—"The quartz outcrops in the district do not contain gold, neither on working below the surface have been found to contain any, although gold has been found in the volcanic rocks of the vicinity. On repeated trials the quantity has been proved to be too minute to be remunerative, only 1 grain to every 100 lbs. of rock so treated, and by far the greater portion of rock contains no traces of gold,"

Mr. Munday, when in charge of the Ooregum Mine some years ago, proved to demonstration that gold was not to be found there in paying quantities, and the present working at the Ooregum and on all other claims, and more especially so the recent crushing at the Mysore Company's mine, have more than substantiated the above assertions. The other class of reefs, for which I should have searched, as Mr. Bell Davies intimates, exist only in the fertile imagination of that gentleman, as, if he had visited the trench 135 ft. long, on the western portion of the claim, which he condemns as useless, and had opened his eyes, he would have found that, shallow as it was, it had shown the total disappearance of seven out of nine quartz outcrops crossing it, and that the other two were barely discernible in the bottom of the trench. I cannot understand what is meant by Mr. Bell Davies' assertion that the present manager "had put in a series of shafts at right angles to the course of the lodes," seeing that, by his own showing, no lodes have yet been found there. I cannot understand how he has been able to get the angle to work on. This may be something new introduced into the art of mining; at any rate, I can imagine the value of such a secret, if such it be. What settled ground does Mr. D. refer to? Does he refer to the hard dolarite, which has to be blasted? If so, he might have cross-cutted from Nancarrow's shaft on spec. Mr. B. D. ridicules the idea of sinking a shaft 16′×5′=80 square feet area, secured with 2″ boards all around; but he says nothing of other shafts on the field—which are being sunk with no better prospects—12′×8′=96 square feet area, secured with 6″×6″ timbers and backed with 1½″ boards. Which is the larger shaft? Which is the least expensive and easiest to sink? Mr. Bell Davies has had no experience in the sinking of shafts for inexperienced miners to work in. Yet he has the audacity to set himself up to condemn what he knows nothing about. He has, however, very wisely refrained from any mention of the gold producing qualities of the whole field. He commends "the miner-like way in which Dr. Atcherley tackled the ground," by putting down a number of small shafts to prove the ground. Now compare this with his report on the working at the Ooregum Mine, published in last week's Journal:—

"The seven trial shafts put down to a small depth in the decomposed rocks have proved that the lodes are not continuous in such ground—a fact fully established years before in Munday's shaft. It has, in my opinion, been a mistake to have repeated the proof so often after the first trial had shown the existence of surface slides instead of sinking the main shafts and testing the lodes after solid rocks had been reached." These two reports are quite sufficient to show any thinking man (he need not be either a practical or theoretical miner) that the value of these two mines may be made to appear anything on paper, but the real value is not so much as two children's toys, and as much may be said of the whole field; and from the perusal of the two reports the object of his visit to the so-called gold field is very evident, one must be very green indeed not to see it. Mr. B. Davies reports of the Ooregum shafts, one in "decomposed schistose rocks," of the other "in the bottom the soft decomposed surface rocks are changing to a hard metamorphic schist." Capt. Bryant reports of one shaft, "The ground is much harder, composed of hard trap, fissured in every direction, forming a mass of huge boulders towards north-western corner of shaft;" of the other he says, "Rock getting much harder; it is composed of a tough trap rock." Query, Does Mr. Davies know the difference under all circumstances between decomposed schistose rock and wacke? and between hard metamorphic schists and some varieties of trap rock? Being a F.G.S. he should know, but I very much doubt if he does. At any rate he has fully demonstrated his limited knowledge of mining matters.

CHARLES F. BRAY,
Late Manager of Great Southern Mysore Mine.

Some time before I left the mine I proposed, as a matter of economy, that the directors should give me leave to send some of the European staff home, as I could get along with the native labour; this they declined to accede to. I find it mentioned in the report that three of them have since been discharged. I suppose they find it is time to economise.—*Coxwell-road Ladywood, Birmingham.*

THE DULCAMARA ANGLO-INDIAN GOLD EXTRACTION COMPANY.

SIR,—In reading the notice of the above, and the belief expressed that the prospectus of the company was likely to be issued soon, I could not help being struck with the novelty, and the unkindness exhibited to the Indian gold mines in general, in the proposition of such an affair. Whoever is at the bottom of it there is not the least doubt but that it is worthy of the imaginative brain of any of the best writers in Punch, or any of the other comic papers. The whole thing abounds in wit and comicality, which seems to be the result of a patient study of the disheartening promises made with regard to the crushings at the different gold mines in India; and really the only idea that one can derive, or the only conclusion that can be got at, from the repeated promises and untimely puffs which appear from time to time on these mines, is that some such process is actually necessary to guarantee a return of gold from the stone crushed, The idea of a capital of 5,000,000*l.* in 5s. shares, and no one to have more than five shares allotted to them, is really comical in the extreme, but this is totally eclipsed by the idea of dosing the mercury with ·01 per cent. of pure gold, calculated on the weight of ore treated, it is simply superb to think of the produce this would turn out of itself, to say nothing of the gold in the stone; but I must say I think it is a little overreached in stating that the rock which Claudet, or Johnson and Matthey, declared contained no gold, would yield over 3½ ozs. per ton from the operation. Dosing the mercury as proposed with the gold would be really adding 3 ozs. 5 dwts. 8 grs. of gold to 1 ton of ore operated on, and the produce would certainly be this amount minus a small percentage in proportion to the manipulation it underwent; this certainly would be a good produce for even a moderate quantity of rock—say, 100 tons a-day. The promises in some of the prospectuses issued would be totally eclipsed by such returns; but here comes the question, where would the gold come from to dose the mercury? How would the supply be kept up? And how would the shareholders feel about dividends at the reports of such produce? I have not the least doubt but that there are many who would place implicit faith in the feasibility of such schemes, and apply for shares if it was once placed before the public. What consolation to Indian gold mines shareholders!

CHARLES F. BRAY.

CHERAMBADI (WYNAAD DISTRICT) GOLD MINING COMPANY.

SIR,—Your impression of Saturday last contains a letter signed "Vergeus" referring to certain "broad and confident statements" made in sundry circulars respecting this company, issued by Messrs. Beale and Co. As shareholders are aware, the chairman of this company has given such an answer to the first of these circulars as was deemed advisable, and has proved satisfactory, and those shareholders attending the annual general meeting on Tuesday next will be enabled to form an opinion as to how far the statements contained in the circular under notice were justified. In reference to the second circular (and from which your correspondent quotes incorrectly), I can only say the assertions that the chairman has paid only 1s. per share upon his holding and that the full sum paid up is only 4344*l.* are equally untrue.

It is a peculiarity of the statements of Messrs. Beale and Co. that they are generally "broad" and always "confident," and it is only their unreliability which makes them valueless.

London, Feb. 14. F. WISDOM, Secretary.

OOREGUM GOLD MINING COMPANY OF INDIA.

SIR,—The attention of my directors has been called to the following statement in the leading column of last week's Journal:—"Great anxiety is felt concerning the properties in the Mysore district, a rumour being in free circulation that the fact of the 40 ozs. of gold reputed to have been produced within the last few years from one of the Mysore mines has been distinctly questioned by one of the managers in a letter to his directors," and I am instructed by them to state that they infer you allude to this company, in which case I am desired to inform you that they have not received from their manager any such notification, but they have heard indirectly that such statements have been made and rumours circulated.

My board immediately communicated with India, and by last mail received sworn affidavits made before a notary public by five gentlemen who were present at the crushing, stating that the quartz was taken out of this company's property, crushed by the machinery erected by the old company, and realised the amount of gold stated.

T. W. MARTIN, Secretary.

George-street, Mansion House, Feb. 16.

"THE GOLDEN CHERSONESE."

SIR,—The interesting article in the Journal of last week, under the above heading, awakens reminiscences, no doubt, in the minds of many, who, like myself, have for years been connected with the Far East. If the concesssion you allude to be indeed comprehensive a great step in advance has been taken towards the solution of the problem as to how the supply of gold is to be maintained. Before banking facilities were established in Singapore there was in the office of each leading merchant a department for the purchase of the gold dust regularly offered for sale by the natives of the adjacent peninsula. The greater part of this went to Calcutta to pay for opium, the headquarters of which were centred in Singapore. Then, as at this day, native princes in whose dominions no recognised currency was extant, visited Singapore and brought with them bags of gold dust and nuggets to defray their expences. In my time it was always thought that Pahang contained the richest deposits of the precious metal, but in the case of Johole the existence of the wonderfully rich quartz reefs had been proved to a certainty, while the River Geminchi, which forms the boundary separating those territories, was known to be a very Pactolus.

By-the-bye, tangible proofs of the alluvial deposits of Pahang are on their way to this country now, in the shape of two handsome watch-chains presented to the sailor princes by the Sultan of Pahang. They are composed of crude nuggets, varying from the size of a kernel of Indian corn to that of a filbert, simply strung together by wrought links. At any rate, when I was last in Singapore, rather more than two months ago, I saw the raw material in the hands of a native goldsmith, to whom the Sultan had entrusted the task of preparing his gifts, as I have described, and I assure you they would have made an Australian digger's mouth water. If European capital and enterprise can be brought to bear upon the hidden treasures of the Malay peninsula there will soon be an end of the gold scarcity.

London, Feb. 16. AN OLD SINGAPORE RESIDENT.

THE GOLDEN CHERSONESE.

SIR,—I was gratified to read the remarks in last week's Journal on this subject. We read that Solomon obtained his gold from "Ophir," and from the fact of gold abounding in the neighbourhood of the celebrated mountain of that name on the Malay peninsula, it can, and has been, fully demonstrated by several writers, both ancient and modern, that this is the veritable land from whence Solomon obtained his gold. And the traditions of the Malays of the peniusula also point out that in remote ages large caravans came from the North and took away gold and other valuable products from the southern portion of this peninsula, and even in the present day traces of a main road running through the peninsula from north to south are plainly discernable; these traces of the road where visible plainly show that it must have had an enormous traffic on it at some remote period. The Malays say that by this road mahometanism found its way into the peninsula and adjacent islands, and I have not the least doubt but that a large quantity of gold also found its way out by the same means. Newbold is mentioned as having reported some years back that "the average result obtained by rude native process at Chinendrass was 24 grs. of pure metal from 40 lbs. of pulverised stone." I can confidently vouch for the truth of that statement from actual experience, as having spent several weeks at Chindrass (as it was then called), exploring the old native workings, &c, for a company which was formed in Singapore in 1871. I made several assays from a pile of from 15 to 20 tons of quartz, which gave an average of 4 ozs. of gold to the ton of quartz, and I have every reason to believe that the company referred to obtained 3 ozs. of gold per ton from a general crushing of a considerable quantity of quartz some time after. This company, through inefficient management at the mines and a lack of capital, were obliged to suspend operations. The quartz I assayed came from a shaft about 40 ft. deep, where the reef was between 3 and 4 ft. thick, and had every appearance of being a true fissure vein, and as such continuous. The country rock is all that can be desired for the production of gold, it being a talcose schist, verging into a mica schist in places; the ground is easy to work, Chinese labour plentiful, timber for fuel and mining purposes without limit, and water abundant except for motive power. With an efficient and honest manager at the mines, not too much red tapeism at home, and a judicious and economical expenditure of capital, I believe that the gold mine at Chindrass would turn out to be second to but few mines; and, judging from my own experience and what I have heard of Indian mines, I fully believe it would in three years from the commencement of operations pay as good dividends as any of the Indian gold mines, and that it would be a good dividend-paying mine long after many of the present Indian mining companies cease to exist altogether. I also think that other reefs may be found in the neighbourhood of Chindrass, as when I was there I heard many extraordinary reports of other places where gold had been found, but owing to the impenetrability of the jungle, together with the desire of the company, I made no explorations except in the immediate vicinity of their mining camp. Now that this portion of the globe has been thrown open to European capital I have not the least doubt but that a good field for its employment is thus found, not only for gold mining, but for mining for other minerals as well. Wishing all those who may embark in this enterprise the hearty success which I have every reason to believe awaits them.—*Birmingham, Feb.* 13. CHARLES F. BRAY.

THE HOOVER HILL GOLD MINING COMPANY.

SIR,—Cannot the directors of the above company follow the example set them by the Potosi, and appoint another manager, either temporarily, during the continued illness of Mr. Remfrey, or absolutely? With the exception of some trivial production no results whatever have been obtained, and the shareholders' patience, together with a large proportion of the capital is being rapidly exhausted. The results of another manager in the Potosi Company has already shown itself in the increase of quartz crushed and proportion of gold to the ton.

Chiswick, Feb. 16. W. H. F.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA.

SIR,—I seldom take any notice of anything that interested parties may write, but as "Fair Play" (in the Journal of Dec. 10) flatly contradicts my statement that "there are claims in the Kimberley Mine which are not worth a farthing," I must tell him that he knows very little about the mine, or he must have some ulterior motive. I can assure "Fair Play" that I do not lose sight of the fact that there are companies capable of paying from 40 to 60 per cent. per annum," and I may inform him that I could name two companies that are capable of paying from 60 to 100 per cent. per annum. But the fact of those companies being so rich does not improve those claims in the west end of the mine that are not worth a farthing. There are many claims in the west end of the Kimberley Mine that for many years no digger would touch because they were of no value, and never would have been located but for the late "company mania" I know that arrangements have been made to float those worthless claims in England, and consequently in the interest of capitalists and honest speculators, in the interest of *bona fide* mining, in the interest of Kimberley and South Africa generally, I will not cease to warn the public against being led into speculations known to be of no value. At the same time, I shall always be pleased to write favourably of any company that is honestly managed and contains the elements of success. The British Diamond Mining Company (Kimberley) is the first company to declare a dividend for 1882. This company has been hauling out reef the greater part of the quarter, notwithstanding which they will pay 10 per cent. for the quarter, or at the rate of 40 per cent. per annum, and this is what the British is honestly capable of paying regularly. They could do more by allowing their dead work to remain in abeyance, but I should be sorry to see them adopt such a suicidal policy. The south side of the Kimberley Mine is all on the move; in consequence of which the celebrated "French company" will be heavy losers. It is a great pity that such a magnificent company should be subjected to the caprice of a "mining board," the majority of whose interests are diametrically opposed to it. It is to me as clear as noonday that unless the Barnato, the British, the French, and Central companies combine for their own protection the unprofitable companies will get the "weather side" of them, and they will suffer accordingly.

I am afraid the Rose Innis Company will not pay the dividend for 1882 that I anticipated, as they are likely to be very much troubled with fallen reef. They have let their tailings to some contractors to wash; these tailings are worth about twice as much per load as the average of the diamond soil of the Bultfontein Mine; it is, therefore, thought that the contractors have what the Americans call "a soft thing." The Barnato Company is doing well, and the quantity of diamonds that the Central Company is taking out is astonishing; they will earn 25 per cent. for this quarter, so that after paying off their liabilities they will declare a very large dividend.

Accounts from the other mines are not generally of an encouraging character. At Ottos Kopje they have struck the blue diamond soil, and the sample brought me yesterday looked fairly good; in fact, not unlike the blue ground of the Kimberley Mine. I shall be anxious to see how it turns out in washing; whatever may be the ultimate result of this concern I am pleased to say that up to the present everything has been conducted in the most straightforward manner. At present there is a dead-lock at the Mining Board, in consequence of the alleged corruption at the late Mining Board election; and if, as Mr. Attorney Corringdon states, the half of a claim was divided into 60 parts for the purpose of manufacturing faggot votes, it is about the most absurd thing I have ever known in connecton with mining, as the greatest novice must know that no person can work a claim of only 2 ft. 9 in. square. However, if the four magnificent companies referred to above should combine they will be able to insist on justice being done to the whole of the Kimberley Mine.

I regret that the number of accidents in the Kimberley Mine are on the increase, and unless the Government takes the matter in hand it will get worse. On Friday last a Cornishman, named Lemin, was killed by a fall of ground; had the poor fellow been warned the same as the others he would have escaped. In fact, if proper care had been taken no person would have been allowed to work under the dangerous ground, which had been further weakened by blasting only about an hour and a quarter before the poor fellow was killed. Lemin was a remarkably steady man, and leaves four orphan children. There is a great deal of sickness in the camp, but as the doctors, with two exceptions, have formed a kind of "trades union" for the purpose of doubling their fees many poor persons will have the pleasure of dying without being stuffed with nauseous drugs.

I have just had the pleasure of inspecting a beautiful box of samples from a new branch which has been struck in the Waterfall Creek Gold Mine (Transvaal). I read a letter which accompanied the samples, stating that "they were a fair average of the new branch," but this can scarcely be correct, inasmuch as in another part of the letter the writer states, "The only means we have of returning the stuff is by bruising it with hammers, and washing it, and by this means we get 5 or 6 ozs. of gold per man per week." This is certainly a large quantity of gold to get by such a process, but if the new branch be equal to the samples I feel sure I could bruise with a hammer and wash out at least 1 cwt. per week. This is one of the places pointed out by Mr. Kitto some months ago. Mr. Kitto speaks very highly of the place, but states that if the samples are not picked it must be turning out much better than he anticipated. Kitto has made a professional examination of the Transvaal for the late Government, and most persons are of opinion that if his knowledge of the mineral resources of that province were published it would cause European capitalists to direct their attention to that quarter. At Spitz Kop there are several persons doing very well; some diggers have been working years constructing water-courses, for the purpose of washing the gold out of their claims, and it will take them years longer to do what if they were in the hands of a good company could be done in a few months. Some fair samples of gold quartz has been found at the Mac Mac diggings from an outcrop also pointed out by Mr. Kitto in May last. The samples give (picked) 400 ozs. of gold per ton; the average of the reef about ⅔ oz. per ton.

At Pilgrim's Rest the diggers complain bitterly of the conduct of the Government in robbing them of their rights. They say the place has been declared a public gold field for over ten years, in consequence of which they left their homes in Australia and elsewhere, believing that they should have as much justice under the Dutch as any other colonial Government. They have in many cases been working for years without making a farthing, hoping (as diggers only can hope) that some day they would drop on a patch of gold of sufficient value to enable them to return to their families. I have just heard the above from an old digger who has tramped all the way from Pilgrim's Rest to this place. There is not the slightest doubt that if the American or Australian Governments had acted towards their diggers as the present Boer Government has done it

would have caused a rebellion, but the diggers at Pilgrim's Rest are so few that they are compelled to put up with any injustice, and as most of them has the misfortune to be English their case is hopeless. The Blanbank Gold Mining Company does not appear to be doing anything as yet, although they have had their concession from the Boer Government some months. It is thought that with an expenditure of about 35,000*l.* in machinery, shafts, and tunnels this property can be made to pay fair dividends. The owners of the farm who are anxious to sell are asking about three times its true value for it. The weather is almost unbearable, every day the thermometer is from 96° to 104° in the shade; every person is praying for rain, but in the absence of black clouds their faith is very small.

Kimberley, Jan. 19. ——— CORRESPONDENT.

THE NEW CALLAO COMPANY.

SIR,—I am afraid little comfort can be given to "Vergens" as to the above mine from any of us home birds. As yet no workings have, or can have, taken place. But if anyone recently home from Venezuela can speak with independent authority as to the reality and value of this property, which "Vergens" seemingly doubts, it would bring comfort to many besides your correspondent. It is well, however, to recollect that this property has been eminently surveyed, and has many advantages over similar mines—such as good roads for transit of machinery, no crossing rivers, near Bolivar, large water power available close by, healthy situation, and being near the capital men easily obtained. From Mr. Skertchly's last advices he was pushing on the work with vigour, so we learn from our latest circular from the board, and if given more time no doubt we shall get further and fuller information by-and-bye. As regards the capital being all called up, no doubt it is a pity, but if it is requisite no one can grumble. Certainly it would be a foolish proceeding to let the property go just when it is about to be fully proved, and when so capital will be got readily enough I daresay to carry the concern to a success. If I recollect aright there appeared lately a letter in the Journal in regard to Venezuela and mining, which I would recommend "Vergens" to read.—*Feb.* 15. A SHAREHOLDER.

THE NEW CALLAO COMPANY.

SIR,—I would like to say, in answer to "Vergen's' letter, published in last week's Journal, that the directors were constrained to call up more per share than was originally intended because the applications fell short of their anticipations, and for the same reason we have not yet been able to apply to the Stock Exchange for a quotation. "Vergens" as a shareholder ought to know that our engineer is now at work at the mine, and we hope shortly to receive such a report as shall be not only a "crumb" but a whole loaf of comfort to him.—*London, Feb.* 15. ——— F. J. WARNER, Secretary.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to hand you my usual budget of news received from this mining centre:—

The ship Francis Thorpe, which arrived in San Francisco a few days ago, brought 1500 tons of steel rails for the Carson and Colorado Mining Company. There are a lot of red wood ties on the way, and the laying of the track is proceeding at a rapid rate.

George Burbank, who has had charge of a surveying party for the E. and C. River Railroad near Cherry Creek, returned to Eureka yesterday. He reports Cherry a lively camp.

The supply of charcoal this winter is greater than the demand.

Yesterday was pay-day at the Eureka Tunnel. The Eureka Tunnel Company made a shipment of ore yesterday to the Eureka Consolidated Works, and will make another to-day.

Benjamin C. Levy, superintendent of the Bowman Mine, shipped 30 tons of ore yesterday to the Eureka Consolidated furnace for reduction. The ore stopes in the mine are looking better than at any time heretofore. The shipment will average $100 per ton—$75 in gold, and $25 in silver. There are 17 men constantly employed in the mine.

Martin Piantoni is shipping some fine carbonate ore from the Dead Broke Mine to the Eureka Consolidated Works.

There are 260 miners working in the Richmond Mine. Mr. St. George T. Bryan, of the Richmond Mine, recently gave a Sentinel reporter a pretty specimen from the 100 level of that mine, which carries native copper. A singular find.

A strike of ore was reported yesterday in the Bald Eagle Mine, but we were unable to learn its extent. This property belongs to the Eureka (Nevada) Silver Mining Company of England.

We were yesterday presented with an elegant specimen of ore from the Queen Mine at Silverado, in Pinto District. The mine is owned by the Jones Brothers, and they now have on their dump several tons of black metal ore that is worth $100 per ton. They have a shaft down 235 feet, and are still sinking and taking out ore. The width of the vein averages from 1 ft. to 20 ins. The Queen is a very valuable mining property.

It is reported that Hon. Thomas Wren will immediately commence developing the Silver State Consolidated Mining Company's property.

The Solid Muldoon Mine, Wood River, has been sold in Philadelphia for $100,000.

Joe Molino and Co. will make a shipment of ore from the Wide West Mine in a day or two.

A new contract has been let to run the Monumental Tunnel 200 feet. Work will be commenced immediately.

London, Feb. 10. ——— RUBY HILL.

DON PEDRO MINE.

SIR,—I quite concur with the letters I have read in your valuable Journal from Mr. Boydell, Mr. Smith, and "An Old Shareholder," and I am glad that the subject of the London management to which, through the Journal, you permitted me to call attention years ago, is now being ventilated. It is evident that Mr. Darlington could not have been sufficiently advised and instructed or properly informed, or he would have recommended a much more powerful and efficient ram than that now at the mouth of the mine, tearing itself to pieces by overwork without making the slightest impression upon the water in the mine, according to the mining captain; in fact, activity without utility. The recent yield from backs left by Mr. Inch is a small flash in the pan, and if produce were plenty the machinery from disuse and decay is incapable of treating any considerable quantity. The board unfortunately seems to be composed of gentlemen unable to take a comprehensive view of the new mode of working at Morro St. Anna, or to understand that playing at mining, as they have been doing for the last seven or eight years, with the exception of the time that Captain Vivian was there, can in Brazil ever lead to satisfactory results, they may have been well intentioned, but shareholders require ability as well as good intentions in the conduct of their affairs. Under the most experienced, judicious, and economical management a very large amount of money will be required to open up the riches of the Don Pedro Mine. Tinkering will never do it. What should be done has been known out here for years, but suggestions would have been useless to a body of directors who are apparently incapable of grasping the subject in its entirety, and who only seemed to understand how to keep their salaries and spend the shareholders' money as it could be drawn from them in driblets in the most absurd and useless manner.

A very long time since I suggested a new company with an entirely new direction, and I now again do so, with a capital of 200,000*l.*, in shares of 2*l.*, the shares of the present company to be received as 1*l.* paid up, and the balance (1*l.*) to be paid—1s. on application, which should form a fund for the following:—To employ the best engineering miner who has had practice in jacotinga, to examine and report upon Morro St. Anna as to the Don Pedro Mine, and as to the most efficient way of working it, having especial regard to laying out the works for its proper development years hence, and not for an immediate temporary profit; should this report be favourable, and that the works he may recommend be able to be accomplished for the uncalled 19s. or less, that that amount should be called up at convenient periods, as it may be wanted; or on an unfavourable report the company should be wound up.

We must, from the late bad management, treat Don Pedro as a new mine so far as expense of opening up is concerned. But with this advantage, we know that when certain matters are accomplished we shall with certainty arrive at gold, which will amply repay perseverance and energy. We shall then be able to forget the woeful past mismanagement, and the establishment would take the lead by far of all of the English-Brazilian Companies.

Nearly the same gentlemen compose the board of the Rossa Grande Company. I have several times called the attention of the shareholders to the mismanagement of that company. There has been no meeting according to the Act for years; no accounts have been rendered, the property has been destroyed for the benefit of a few Brazilians, the plant of the company left in the hands of a foreigner, and the interests of the shareholders utterly neglected by their representatives—the directors. Let a move also be made here to save what remains. I am a shareholder in both companies, and can render very material and valuable assistance in many ways, and have and would do so to an energetic and capable London board. A mine that has paid 100 per cent. upon almost surface workings should not be abandoned when the shareholders are ready to support efficient management. CHAS. H. WILLIAMS.

Serra de Cocaes, Minas Geraes, Jan. 16.

SANTA CRUZ SULPHUR AND COPPER COMPANY.

SIR,—In the Supplement to the *Mining Journal* of Feb. 4 is the report of a meeting of shareholders in the above-named mine, and in which it appears that operations are to cease, and the company to be wound up. It was stated at the meeting "the shareholders would remember that the mine had previously been inspected—that was previously to purchasing it—by four mining captains, who were to some extent well known—Messrs. Rosewarne, Culls, Robins, and Hooker—who stated that the angle of the lode of mineral was about 47°. This expression is utterly unintelligible, no one can possibly divine what it means, notwithstanding some importance seems to have been attached to it. "Had this been the case it would have been a very good thing for the company, but as a matter of fact it was nothing of the kind." Supposing that the angle had been 47°, 49°, or even 50°, I do not see how it would or could affect the company. I do not see how the fact of the "angle of the mineral" being 47° could be "a very good thing" for anyone. To be brief, however, it appears that Mr. Rosewarne, "after close questioning" and examination by the board, was sent to Spain as the manager of the mine, but that "after he had been out some little time it was reported that a slide had come down which would have the effect of throwing the mineral in a different direction; by this means dust was thrown in the eyes of the directors." I cannot conceive that the "slide came down," or that it moved at all, but rather that the operations moved towards it. Be this as it may, or might have been, it would appear that it dusted the eyes of the manager also; that instead of welcoming it as a propitious guest, and of recognising it as a renovator and fertiliser of the lode, as he should have recognised it, it would rather seem to have confused and bewildered him. If it was merely a slide that dislocated and obliterated the lode, why was it not sought for and found? A miner should have known that the displacement of a lode occasioned simply by a slide would not be of great extent, that it would not have been removed far from him, and should have known also in what direction to go to find it, at the same time with a full expectation of finding it in a renovated and an enriched state. They have it appears had the mine examined by no fewer than eight or nine so-called miners, and surely it is a strange matter that none of them saw that it was merely a slide—if it *was* a slide—which caused the confusion and imperilled the existence of of the mine.

The owner of silver mines some years ago said to me "I wish you would go down and look at my mine: I do not know what they are about. Three or four years ago they lost the lode, and I find that they have driven a cross-cut 100 fms. to find it." I went as requested, and found that in a winze sunk on a sterile lode 20 ft. below the level they had come down on a bed of clay, which had entirely obliterated all signs of lode, and which I at once saw was a slide. From the bottom of the winze they had indeed driven a cross-cut 100 fms. through a rock of flinty hardness, and, of course, still no lode. This cross-cut could not have cost at all less than 1500*l.*, to say nothing of four years loss of time. I requested them to work in the direction of which I expected to find the lode, and ere they had expended the amount of 10*l.* the lode was struck in a mass of silver. So much for the right and wrong working of a mine, and for the necessity of conducting the operations under the superintendence of a miner. Without making any allusion to those connected with the Santa Cruz, it seems to be thought now-a-days that anyone will do to superintend the working of a mine, and such in this respect is the ignorance of the public that they will launch their money upon the report, and the mining knowledge of such reporters.

King's-square, Feb. 15. ——— JOHN LEAN.

LEAD REPORT.

SIR,—Since our last the market has been firmer, and the following sales are reported:—

300 tons rich Spanish lead.....	£14	18	9
200 „ ordinary	14	16	3
500 „ Greek lead... £14 15 0 and	14	12	6

Market advancing.—*Newcastle-on-Tyne, Feb.* 16. STOCKS.

THE CALLINGTON DISTRICT, AND ITS MINES.

SIR,—From a recent visit at Wheal Fortune I see they are getting on satisfactorily with their concentration work; and as they have already much of the lode broken that will produce about 20 ozs. of silver to the ton, after deducting the cost of concentration, it will leave about 3*l.* 3s. per ton clear profit, as the tributers at present are more than paying the cost of the mine from copper and arsenical mundic. From present appearances there is nothing to prevent the Wheal Fortune from figuring in the Dividend List before midsummer, as it is possible to strike on another carbona or bonanza of silver any day now, as they did not long since, when it was worked as Wheal Newton. They then found one of these bonanzas, that produced 11,000*l.* worth of native, ruby, and fahlerz silver in a few months. On my way I passed through the Wheal Langford. I see they are getting on with all speed for the erection of their machinery. When the water is pumped out they will be able to get silver, copper, and arsenical mundic ready for market. The carriers are bringing on the engine, so everything is getting on as fast as the nature of the work will permit.

They are making good progress in driving the Silver Hill Tunnel. They will very soon intersect another lode. The last lode they went through, although not rich, is a very large lode, and producing some splendid copper ore of a very high percentage; and as the south part of the lode is bearing a little more north than the north part of the lode in the western end, the lode is naturally going smaller and more compact, and by driving a few fathoms further no doubt better results will follow. The Lady Ashburton is still quiet, but any one knowing the situation of their mine, and seeing how rapidly the Silver Hill Tunnel is going north, and sure to go through all the lodes in the sett, cannot blame them much for keeping quiet for a short time. I have seen one of the largest shareholders in Trebartha and Wheal Luskey Mines; he says the Luskey is improving fast going to the hill. I and every one with me on my last visit thought such would be the case. They have not cross-cut the lode in Trebartha for some time past. They will soon now be in a position to make a return to show the actual worth or value of this large lode. They are getting on as fast as the nature of the work will admit at Redmoor Mine; they have the shaft secured and foot road in as far as the 60 fm. level. Now for speed they want the steam capstan complete, when they will soon be making their way to the bottom of the mine. The Callingtonians are eagerly looking forward to the clearing out of this mine, as so soon as complete it will employ a great many hands. New Holmbush at present is the only mine in the district that employs many hands. They have about 250, and are returning a fair quantity of arsenical mundic and copper ores, with every prospect of a continuation.

Callington, Feb. 15. ——— JNO. BUCKINGHAM.

CARADON AND PHŒNIX CONSOLS.

SIR,—During the past few weeks I have received a good deal of information respecting the Caradon and Phœnix mining property from miners who once worked in the mine, and from eminent mining authorities. The particulars were of such auspicious nature as to induce me to avail myself of a visit to the mine at the earliest opportunity. A few days ago whilst there I fortunately met a miner who once worked in the mine and knows the district quite well. After I had viewed the stuff on the floors and the nature of the stuff which had been broken from the various lodes which traverse the sett I could not refrain from expressing myself as being at a loss to understand why the proprietors did not give this valuable mining property a more vigorous development, as the prospects of it proving a successful, productive, and remunerative concern are propitious and encouraging. The property, from its geological formation, is very congenial for abundance of mineral. It appears that the bottom ends never presented a more cheering and favourable appearance than they did when the mine was abandoned. This in my opinion is very evident and probable, as the drivages were in all probability approaching the junction which, at a shallow or moderate depth, is formed by a lode underlaying north and a few fathoms south of the shafts. The mine is situated north of the Phœnix United Mines, and in the parish of North Hill. The two shafts, which are sunk about 70 fms. apart, affords good ventilation for the extension of different levels, and for further prosecution of variousoperations. The engine-shaft, according to information I have received, is sunk 60 fms. below the adit on the course of the lode; the lode in the 60 fm. level will, for the whole drivage, average about 4 ft. wide, which produced good stones of copper ore. This lode, according to my informant, presents every indication of being found a productive lode at a deeper level. The new shaft is sunk 70 fms. from the adit. About 30 tons of blende ore was raised in sinking the last 10 fms. of this shaft. The lode will average 4 ft. wide, and is composed of fluor-spar and mundic, intermixed with copper ore. There is a branch of blende in the western end of the shaft 6 in. wide. In driving this end a highly mineralised cross-course was intersected, which is very easy for driving operations, and a level to the south lodes would undoubtedly lead to beneficial results. It is the general opinion of those who have worked in the mine, and the opinion of those who have inspected the property, that the Caradon and Phœnix Consols will prove a profitable, productive enterprise when sunk deeper and fully developed, and if worked on true and legitimate mining principles. In conclusion, I may say that I know of no sett that could be more cheaply and easily worked in the county, there being at all times of the year an ample supply of water sufficient to work all the necessary machinery. A considerable amount would, therefore, be saved in coals, as no engine would be required to pump the water or haul the stuff. I have no hesitation in saying that capitalists and gentlemen interested in mining pursuits will do well by paying the mine a visit, after which I think they will feel justified in recommending it as a sound and remunerative investment—a prognostication fully borne out by mining experts of reliability and long standing, provided that a good company be formed to give it a vigorous prosecution. Many interested in mining pursuits would, doubtless, like to hear the agent who once had charge of the mine give his opinion on the property, particularly on the lodes which forms the junction. It is in my opinion fully worthy the inspection of any person interested in mining.—*Feb.* 15. THE POL PEN.

DEVON GREAT CONSOLS.

SIR,—As a shareholder of Devon Consols I protest against the manner in which reference is made to these mines in an article by Mr. James H. Crofts, on "Market Echoes, and Mining Matters," in last week's Journal. In this article the writer states—1, that last half-year's working was conducted at a loss of 1000*l.* a month; 2, that the shares are now at 700 per cent. premium; and, 3, that the prospects for copper in these mines are not encouraging.

Now, Sir, with your permission, I will proceed to show that all these statements are very inaccurate. In the first place, the total "loss" for the half-year (if we take into consideration that seven months' costs were charged against six months' revenue) was only a little over 2000*l.*, and this "loss" was mainly due to certain abnormal additions to and repairs to plant and machinery, which additions, &c., were paid for out of revenue, and have materially added to the value of the property. The second statement that the shares when quoted at 8*l.* are at 700 per cent. premium is still more misleading. It is quite true that the monetary capital of the company is 10,240 shares with 1*l.* paid; but, of course, the real capital consists of the extensive machinery, plant, rolling-stock, &c., worth according to the last valuation no less a sum than 55,053*l.* 7s. 2d.—and as this valuation was made before the repairs and additions just alluded to the present value cannot be much under 60,000*l.* If to this be added the cash balances and the reserves of ore the total capital cannot be much under 100,000*l.*—if, indeed, it does not exceed it—and this would give a value to each share of about 10*l.*; so that instead of being at 700 premium they are really at 20 per cent. discount—a marvellous difference truly. I do not know how Mr. Crofts obtained his information about the prospects of the mines. The best answer is that the reports state just the opposite, and unless we are being deliberately misled by our own officials the chances of a good find of copper ore increase week by week.

Thus far on the facts. I should like to add one word as to the future. With the improved output of copper ore and the new contract for arsenic I think we may confidently reckon on two dividends at least during the present year, and on the chance, at any rate, of some important discoveries. Indeed, the causes of last year's depression may be said to have passed away, and we may fully expect a steady rise in the shares to something like the prices of 1880, with a chance of still further improvement, for (as was stated in the *Mining Journal* of Feb. 4) "the returns of mineral are now quite equal, if not more, than when the shares were selling at 18*l.* to 20*l.*" It is not too much to say that if we had not had during the whole of last year an extraordinary succession of bad luck the shares would now be selling at from 25*l.* to 30*l.*, as the rise in the shares of all the principal mines has been enormous. In conclusion, I affirm that if intending investors would examine for themselves the financial position of Devon Great Consols they would find that these shares are, at present low prices, incomparably the cheapest in the Dividend List.

Westbourne Park, Feb. 13. A DEVON CONSOLS SHAREHOLDER.

EAST WHEAL ROSE.

SIR,—I desire, as an original shareholder in East Wheal Rose, to express, through the medium of the Journal, my personal satisfaction with—First, the system of monthly reports which the directors issue to us during the progress of the reopening and developing of the mine; and, second, with the gratifying news which is contained in the last monthly report recently received by me. Since I became an allottee of shares in this company I have been, almost weekly, pestered with letters and circulars denunciatory of the mines, and uncomplimentary to all connected with the property. As it happened, I know a good deal of the past history of East Wheal Rose at the time I applied for some shares. The rubbish which has been sent to me by these circularising people, therefore, has had with me its proper effect. I fear, however, that with other shareholders who, unlike myself—and like most people who apply for shares in mining companies—knew nothing about the mines at the time and what they know (?) now has been derived from these gratuitous correspondents. Everyone must, of course, act for himself, but I cannot refrain from giving a word of warning to my fellow-shareholders (knowing, as I do, that we have a grand mine in East Wheal Rose when at work again), and it is not to be led away by these gentry, whose occupation is one of two, either to puff some mining property of their own, or to be wreckers of public companies. Some legal and other friends of mine I may say have had their attention drawn to at least one firm of solicitors who lend themselves to certain notorious would-be wreckers. I may go further, and say that this combination is being judiciously watched.

Feb. 14. AN ORIGINAL SHAREHOLDER.

EAST WHEAL ROSE.

SIR,—A few days ago I was at East Wheal Rose, and being a shareholder I took most particular notice of the progress and manner in which the works were being conducted. The engine-house at Penrose's shaft was completed, and the bob for the 90-inch cylinder engine fixed in its place. The cylinder of the engine was being fitted into casing, and preparations for fixing the same in progress. All the boilers were on the ground, and the seatings for the same in a state of forwardness. The shears were complete, and merely required to

be lifted to their position. The steam capstan was also nearly ready, and a good stock of the pump-lifts ready for dropping into the shaft. In fact, everything is being done with the utmost energy and forethought, as is evidenced by the durable and substantial character of the work. And it is perfectly clear that the executive know perfectly well what they are about, and are putting their knowledge to the best account. I also notice that the house for the 100-inch engine was built ready for receiving the engine. Good progress was being made with the buildings for dressing-floors at Penrose shaft, and it is intended to get these at work as early as possible to prepare for market the ores produced from the new discovery above adit, which is already yielding excellent lead and blende ores. Having been on the mine some four months previously I was certainly surprised to see such a large amount of heavy work done, and everything in such a business-like shape, which makes it perfectly clear that everybody at the works are in earnest, and mean to carry out all they talked about. Possibly I may be that way again shortly, and will write you again. GEORGE GREEN.

Aberystwith, Feb. 14.

SILVER HILL MINE.

SIR,—It must, I am very sure, be gratifying to the shareholders of this property to find that the mine is coming up to the expectations of those who have known the locality and property in the past. No. 4 lode has just been cut into rich and good, and, as borne out by the captain's weekly report, it is likely to continue so. There is also in the immediate future another stroke of luck in store in the cutting of the Wheal Brothers silver lode, which, from past experience, has always created quite an excitement and stir, as immense sums of money have been taken therefrom in neighbouring well known mines. Thus there appears a certainty of Silver Hill being the same from its geological formation. The latest accounts from the mine go to show the extreme probability of this Wheal Brothers lode turning up a trump card; and as the shares are firmly held they will in all likelihood take a considerable rise shortly, if not immediately, as this silver lode is but a few fathoms from No. 4 lode, and the nature of the ground being soft, the drills should make short work of it. After this Wheal Brothers lode is cut it would be policy in the directorate getting a special report on the mine and its future prospects, and thus show up the real merits of the concern and the amount of work done under a vigorous captain, good management, and the advantage of rock drills against hand power. The patience of the shareholders has been laudable, and the reward cannot, surely, from all accounts, be far off We shall see. W. BENNET.

Leith, Feb. 15.

SILVER VALLEY MINE.

SIR,—I am informed that the assets in the hands or power of the liquidator are about 7000*l.* to meet liabilities amounting to about 100*l.*; but, although the claims are admitted, I am told that not a penny has been paid. I hope that the honest officials will not devour all the assets, but will be liberal enough to pay at once the small amounts due to the poor claimants out of such a large sum at command.—*Silver Valley, Feb.* 15. A WORKMAN.

SOUTH DEVON UNITED COPPER MINES.

SIR,—The report of the shareholders' meeting, held on Feb. 8, and appearing in last week's Journal, is incorrect, inasmuch as you have omitted to state that the amendment proposed by a shareholder was not put to the meeting, but was withdrawn, and the original proposition that the report and accounts submitted by the directors were unanimously adopted, and a resolution passed that in future meetings of the shareholders should be held half-yearly.

London, Feb. 16. ——F. R. A. FRANKLYN, Secretary.

TANKERVILLE GREAT CONSOLS.

SIR.—"Lead shares depressed. Very little doing in lead shares." This is the announcement of the Journal almost week by week. It is quite true; few buyers have wanted lead shares for some time and the natural result of this neglect has brought prices to an unwarrantably low level. It may have escaped the notice of your readers to what an extent this has been so with the largest lead property (I believe I am correct in saying so) in probably the richest district for this mineral in the kingdom. I refer to Tankerville Great Consols. The shares are 1*l.* each, fully paid, and the quotation indicates some can be bought for 5*s.* or 5*s.* 6*d.* This price is quite ridiculous, and arises simply, I should imagine, from the total neglect of lead mine shares. But why, I wish to know, should lead mine shares be so depressed all round? Like copper, tin, and other minerals, some mines are good with splendid prospects, whilst others are bad and worthless. Are the progressive and prospective values of some of the mines of no account whatever? One would judge so from the entire neglect into which they fall It may not be generally known that there are many important points to come off at the Tankerville property within a short period. Potter's pit, one part of the property is nearly cleared, machinery fixed, and very shortly ore in large quantities will be raised. The prospect here alone would very few years ago have maintained the shares at par, but at the present time the public, who have squandered their money right and left in all kinds of dubious and worthless undertakings, pay no heed whatever to these important and interesting points. Mr. Watson, the managing director, said at the last meeting, or at the previous one to it, that he would not part with his large holding at four times the price of the day, which, I believe was 12*s.* 6*d.* to 15*s.* I am by no means sanguine that his price will ever be attained, but I cannot forget that Panulcillo copper shares stood three or four years ago at as many shillings as they are now pounds—no one would look at them because they were low. I have no connection with share dealing, or with the Tankerville Company, beyond being a shareholder, and some of my shares have cost me at an equivalent of 2*l.* per share for the new company shares (now quoted 5*s.*), *i.e.*, 6*l.* or par for old Tankerville. The administration of this company is first-class, and lead, judging from the low stocks, cannot, it is thought, remain long at present price. I trust, therefore, that holders of Tankerville shares will not throw their property away. Things cannot remain as they are for ever. EXPECTANS.

WHEAL VOR DISTRICT.

SIR,—The latest developments at the New Great Wheal Vor and the Great East Vor confirm all I have previously said or anticipated about these properties. The lodes all grow richer as the workings are carried down, and as to the Great East Vor, the opinion gains ground that the two lodes—which are now very rich—will form a junction at 2 or 3 fms. lower down. At present the lodes are being developed from two points, at the junction there is little doubt there will be found one of those enormous deposits of tin which characterise the district. These properties cannot be surpassed in the county, and that is not my opinion only, but the opinion of all competent judges whom I have heard speak on the subject. There are good times coming for Cornwall, and it is especially gratifying to see this celebrated old district reasserting its ancient fame. HUEL.

WHEAL CREBOR.

SIR,—I was glad to see in Mr. Croft's "Notes" of last week a reference to the low price of these shares, and his remarks thereon are well worthy of consideration. "History repeats itself" as well in mining as in politics. In 1879 Wheal Crebor was just merging into notice as a prospective dividend mine, and the prospects in the old shaft were so good that towards the end of the year shares had risen over 300 per cent., and in the early part of 1880 they had risen to 13*l.* per share. Since then it has paid good dividends, and has maintained its position in the Dividend List with very little variation. While it has been thus profitably working a work commenced in 1878 by Capt. Andrews (for the purpose, as he stated, of going right down in the midst of the richest ore ground in the sett) has been steadily progressing, until now we are within a month of the culmination of it, when a new shaft will be sunk to the 132 fm. level, and the lode (which is calculated will be worth 100*l.* per fathom) will be cut. It does not require much perception to see that this will open out the resources of the mine immensely, and we shall not be long before we see these resources taking the practical form of increased dividends, and as a matter of course we shall find a corresponding increase in the price of shares. There is not a doubt that as the development of the mine proceeds the reserves will keep on increasing, and we shall have increased returns for many years to come.—*Manchester, Feb.* 14. A SHAREHOLDER.

REPORT FROM CORNWALL.

Feb. 16.—There is little or nothing of special interest to note in connection with mining affairs, which are, on the whole, of a remarkably quiescent character. There is, however, little if anything to regret in this, for we have never been able to point to a period at which more solid progress has been and is being made, and in which the condition of individual mines generally was so satisfactory. In saying this we are, of course, mainly referring to our tin mines, but there are not a few substantial crumbs of comfort also for those who are interested in copper mines also. It is quite an open question whether the permanent interests of mining as an industry would not gain more than they would lose by the mere frequent recurrence of such comparatively quiescent intervals as that through which we are now passing. Our idea is that they would.

Now that the development of our tin mines in depth is rapidly becoming year by year more vitally important, especially in the Camborne and Redruth districts, it seems clearly necessary that more attention should be paid than has hitherto been paid even in the best managed mines to the improvement of their drawing gear. With very deep mines the question of haulage becomes the most important element in their profitable prosecution; and in this respect Cornwall is certainly not yet up to the mark of other parts of the kingdom. By the adoption of the winding-gear and cages of the collieries—with the necessary adaptations—enormous gains would be obtained in operation. No doubt the cost would be heavy, and perpendicular shafts would be needed; but it will never do to wait until the necessity forces us in seriousness to the choice between this heavy outlay and abandonment. The question really ought to be faced at once by the mines that are most nearly interested, and time taken by the forelock, so far as that is possible. At least, if nothing is done forthwith, the subject is one that fairly claims to be considered, and to which the Mining Institute, for example, might profitably turn its attention.

TRADE IN SOUTH WALES.

Feb. 16.—The hubbub about the probable exhaustion of the Welsh coal fields at a not remote date has been only a nine days' wonder, as the figures brought forward by various competent authorities prove that the pessimist orator spoke not from the fulness of knowledge. Mr. Joseph, of Tydraw, who has been over the ground again and again, thus gives the amount in three valleys alone: The area of coal unworked and partially worked in the Aberdare Valley to Navigation is 12,600 acres, with 347,000,000 tons to be worked; Taff Valley, 20,000 acres, and 711,000,000 tons; Rhondda Fawr and Rhondda Vach 30,000 acres, and 1,199,000,000 = 630,100 acres, and 2,257,000,000 tons of coal to be worked. These districts form only a portion of the Welsh coal field, so that the question may be settled by the assertion that many centuries will yet expire, even supposing that no more coal be discovered, before we come to the end of the coal measures of the districts. The steam coal trade bids fair to be active during the whole of the present year, and prices will not go up to any great extent. The failure of a sufficient supply of labour may, however, interfere with the output. Cardiff sent away last week 135,026 tons; Newport, 26,776; Swansea, 27,522.

The sale of the East Moors Ironworks last week, which were established some two years ago by a Hull firm, and the forthcoming sale of the Penarth Ironworks, seem to afford evidence that the high rents and rates in the region of the Welsh ports, added to the higher price of labour, militate against the establishment of various branches of the iron trade in the towns. An attempt was made to establish works for the make and repair of engines in the Rhondda Valley some time ago, but it did not succeed, neither did the bridge building work at Waun Tresda. London, Manchester, Hull, and other English towns have such a reputation for engineering that the current runs usually in their favour. Some time ago a firm in Cardiff wished some alterations made in their machinery, and they employed a local firm, but the work was so inadequately done that the London firm who made the machinery had to be applied to at last, after the loss of much time and the attendant inconvenience of delay.

The weekly mail service between Milford Haven and New York seems likely to take place. A bill has been introduced into Congress by the Postmaster-General for the establishment of such a service by the aid of ships of American construction capable of running 18 miles an hour. The compensation is to be $12,500 for each outward bound trip made within six days, $10,000 if made within seven days, $7500 if made within seven and a half days, and $5000 if the trip occupies more than the last named time.

The New Dock Bill at Cardiff, which is now before Parliament, will be petitioned for by the Cardiff Corporation, but some of the freighters seem inclined to oppose it. It will raise the price of coal 1*d.* per ton, which seems little to the public, but will bring in some 50,000*l.* to the Marquis per annum. The income from the docks at present, it is stated, is some 70,000*l.* per annum, for an outlay of 2,500,000*l.*, but there can be no doubt of the fact that the Marquis is recouped in other ways by the wonderful rise in the value of his land round about the docks for miles. His rent-roll from the county of Glamorgan was returned at 186,000*l.* per annum when Lord Derby moved for returns some few years ago, and the value has gone up since then considerably. A new dock and timber float is much needed, but whether the Marquis makes them or a private company does not much signify so long as they are made. No doubt a private company would carry out the undertaking on a much more economical plan than Lord Bute, as there would be no "ornamental gentlemen" employed, and the strictest economy would give a much higher dividend than could be hoped for under other circumstances.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 16.—This week the chief feature of trade is the stronger prices which finished ironmasters are demanding consequent upon the rise in ironworkers' wages noted below. They are asking advances varying from 2*s.* 6*d.* to 5*s.* per ton, according to the descriptions of iron needed by customers. Sheets and plates are especially stronger, and Messrs. E. T. Wright and Son, of Wolverhampton, officially notify that previous quotations are withdrawn consequent upon the increased cost of manufacture. "Marked" iron prices, it should be understood, are not at present quotably affected by the rise in wages. Pigs are in large out-turn. Prices here again are strengthened by the probability that from the furnacemen there may now come a demand for higher wages of 10 per cent., since they usually follow the finished iron operatives. Part-mine pigs are selling at 55*s.* to 60*s.* per ton, according to brand. Other pig prices unaltered. Ironstone of the best argillaceous descriptions is sought after at varying rates, and hematite and purple ore needed at the finished ironworks is not to be had at any less money than recently.

The South Staffordshire Mill and Forge Wages Board annual meeting was held in Wolverhampton on Monday. After the transaction of the ordinary business the men's representatives put in their claim for a rise in wages similar to that which had been granted to the operatives in the North of England. The masters after some discussion decided to grant the rise demanded—9*d.* per ton for puddlers and 7½ per cent. to millmen. The concession was made upon the ground of expediency, and not, they wished it to be understood, because the men had any just ground for claiming the rise, since they were working under a sliding scale arrangement. Puddlers' wages now become 8*s.* per ton. But the rise throws over the sliding scale, and the accountants of the board will not, therefore, continue to take out the quarterly average net selling price of bar iron, by which wages have hitherto been regulated. The rise is to take effect immediately and to continue definitely up to April 30. Before that date arrives it is expected that the board will again meet to consider some proposal from the men for the adoption of a new scale if it can be arranged. This decision regulates wages not only throughout Staffordshire, but likewise in Worcestershire, Shropshire, Lancashire, and South Yorkshire.

A deputation of the North Staffordshire miners has waited upon the coal and iron masters, asking them to concede an advance of wages. After the application had been discussed for a considerable time the deputation retired, and on being re-admitted Mr. Wagge, the chairman of the masters, told them that although certain inequalities, particularly in ironstone getters' wages, to which their attention had been called, formed a proper subject for adjustment, these inequalities formed no argument in favour of a general advance. The employers, therefore, found it impossible at present to concede any advance of wages, such as had been given in October last, but they were as anxious as the men that prices should enable them to grant a further advance. The conference was adjourned until the 27th inst. to give the men the advantage of any further rise in prices.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 16.—At the ironworks in Derbyshire a steady business continues to be done, there being a fair demand for what pig is made, whilst the local consumption appears to be increasing. The pig has a good reputation in Staffordshire and Lancashire alike for mill and foundry purposes, whilst the finished material sells largely in Sheffield and other places. A heavy tonnage of ironstone is brought from Northamptonshire, on which our ironmasters now depend more than ever, and some of them are also looking forward to the opening out of the ore in the county of Rutland, to which a railway has been in course of construction for some time. The mills have been running better of late, there having been an increased demand for merchant iron. Most of the foundries are now doing well, there being an increasing enquiry in particular for gas and water pipes, as well as engine requisites. Milling tools are in much better request, and the Messrs. Lucas, of Dronfield, who are well known for their steel spades and shovels, as well as malleable iron castings, have received a considerable order for the former, as well as picks for the diamond fields of the Cape, as well as Australia. At the same place the steelworks are as active as ever in the production of rails, for which there is an increasing demand.

The coal trade of Derbyshire is by no means so good as it was, and many collieries are working short time, and are likely to continue in that state, for no change for the better is likely to take place as regards house coal. Trade with London from several places has fallen off, and the returns show that a less quantity of coal was sent there by railway last month than there was in January, 1881. Taking the last three months, it appears that the quantity of coal carried by railway to London in November was 575,634 tons; in December, 531,381 tons; and in January, 553,263 tons, or 22,371 tons less than in November. Steam coal has been going off tolerably well, although this is rather a dull time for it. The great want felt is a port for supplying the coal from Derbyshire within a moderate distance, so as to get the steam coal off, and for this purpose the scheme of Mr. Thompson, to send it by way of Boston Deeps, appears to be the one that would be most advantageous to the colliery owners, and no doubt more will be heard of it during the year. Gas coal has been sent away much as usual, for the requirements are known beforehand, the contracts being made in the summer for certain monthly deliveries. Engine coal of late has been in better request for the Lancashire, Cheshire, and other manufacturing centres. Contrary to what might be expected, a considerable tonnage of coke has to be imported from South Yorkshire for the furnaces in Derbyshire, although the same quality of coal from which the coke is made is actually raised at the collieries belonging to the ironworks.

In Sheffield almost every branch of industry is in a highly active state, and orders on a large scale are daily being received from America, our colonies, and from the home markets as well. Steel makers are particularly busy, and it is said that contracts will before long be in the market for upwards of 250,000 tons of Bessemer rails, particularly for Australia. America continues to be an excellent customer, and, despite the efforts made by the iron and steel makers in that part of the world to compete with the English, they are not doing so by a long way, for, in spite of the heavy duty on rails, it is said that Mr. Vanderbilt has sent out a considerable order for steel rails to England. The new steel armour-plates keep the men at the Atlas and Cyclops Works as busy as they can be, and enquiries with respect to them are being received from several governments, who propose adopting them. Ordinary plates and sheets are also in good request, and, indeed, the same may be said with respect to every description of mill material. Crucible steel was scarcely ever in such brisk demand as it is at present, large quantities being required for sheets, wheels, axles, and structural purposes. The busy season for sheep-shears has now commenced, more particularly for Australia, while orders are also being booked for them for South America. The cutlery houses are working well, a good deal being done for America, as well as for the home markets. Edge-tool makers are now working well, as are file, saw, and razor makers. The engine works are doing well, the principal makers having good contracts in hand, whilst machinists are busier than they have been for a long time past. At the foundries work has become much better both in light and heavy castings, a good deal of the latter being for heavy machinery.

The collieries in South Yorkshire are not so busy as they were; still the men are as well off as those in other districts, if not rather better. The weather has been much against a busy business in house coal, yet some of the collieries have done well of late so far as regards the London trade. Steam coal has also gone off well for the time of year. A large quantity of coke is being made in the district and is sent into several iron-making districts where not so long since only the Durham coke was used.

The North Gawber Colliery, near Barnsley, which a few months since was given up by a limited company after all the capital was lost, has been taken by two gentlemen, and it is understood will be opened out at once. The South Kirby Colliery in the same district, which has also been standing, only one shaft being sunk on the coal, is also about to be opened out.

TRADE OF THE TYNE AND WEAR.

Feb. 15.—The weather during the past week has been extremely fine, and the shipments of coal and coke on these rivers have been large. At the Tyne Docks 105,000 tons have been shipped, and this exceeds the usual average, but the shipments on the north side of the Tyne have not been so good, and business has been rather quiet at some of the great steam coal collieries; as a large business was done in steam coal during the three months ending with January this trade may be expected to be a little slack for the next few weeks. The gas coal trade and most of the other branches of the coal and coke trades continue very strong in Durham. There is not much change in prices all round, but they are well maintained, and a rise in the price of coke is expected very shortly. Manufacturing and smelting coals are also very firm, with a good demand, and are pretty certain to improve in value shortly. The great general increase which has taken place in the export trade of the country, as disclosed by the Board of Trade Returns, has been fully contributed to by the iron and coal and other products of this districts. In the quantity of coal shipped the north-east ports in January show an increase of 86,114 tons over the quantity for the corresponding month of 1881, whilst in the value of the goods exported other than coal and coke the increase is not less than 209,751*l.* The increase is not so great in the exports of coal to foreign ports, but mainly in that of the shipments to other British ports. The great bulk of the increase in the value of other goods arises in Newcastle, Middlesborough, West Hartlepool, and North Shields. These facts augur well for the trade of the year locally. The budget of the North-Eastern Railway has

been presented—a most important subject so intimately connected with the mineral and general trades of this great district. In the last half-year the company expended 177,933*l.* on capital account. One-half of this sum has been expended on lines and works that are open for traffic, in addition to and improvements of the present lines and works; and on the Pickering and Seamen branch 18,538*l.* On the Whitby, Redcar, and Middlesborough branch, 34,849*l.*; on the Tynemouth railways, 21,341*l.*; on the addition to lines at Stockton, 10,608*l.*; on the deviation of lines of rail at Tyne Dock, 5186*l.* In the half-year that has been entered upon it is proposed to expend 322,890*l.*; of this 127,540*l.* is to be applied to improvements on and extensions of the lines and works open for traffic. All these works are expected to be finished this year; 75,000*l.* is to be spent on additional rolling stock. It will be seen that the company purposes to meet this half-year much more liberally than in the past some of the pressing needs of the growing industries of this immense district. Arrangements are in progress for the formation of a Limited company to purchase one of the largest gas and house coal works in Durham, which is now in the market for private sale, the price asked being close on 300,000*l.* Should this scheme be carried out, which appears to be probable, it will lead to the further development of the works, and the opening out of a large tract of coal hitherto only partially worked.

The iron shipbuilding and engine works, factories, &c., on these rivers are very fully engaged at present, and overtime has in many cases been resorted to. The men generally are also moving for increased wages. The pig-iron trade has to a certain extent been relieved from the pressure which weighed so heavily upon it, owing to the financial difficulties reported from the Continent and the ironworkers' strike; but business is not yet very active. A large amount of Cleveland is sent to Scotland usually, but the present low price of Scotch iron operates against the trade. A certain difference in the value of Scotch and Cleveland iron is necessary—about 10s. per ton—to ensure a good business in the North for Cleveland pig-iron. The local consumption is, however, increasing, and this is likely to continue if nothing occurs to cause differences between the ironmasters and the ironworkers. Large orders are in hand for finished iron, and manufactuters expect to get higher rates. The mills and forges throughout the district are well employed, as also the locomotive, engineering, and wagon works, &c. Steel is also being produced on a large scale at the works at Eston and Darlington; means are being taken to increase the output. The quotations for finished iron are—common bars, 6*l.* 12s. 6d.; angles, same; ship-plates, 7*l.* 5s. to 7*l.* 7s. 6*l.*; boiler plates, 8*l.* 5s. Pig-iron has fallen 6d. since Tuesday. Merchants quote 41s. 6d. No. 3. Warrants are about 3d. per ton more than ordinary iron. The most marked feature about warrants is that stocks are decreasing considerably. Messrs. Connal's stock is now 173,075 tons, a decrease on the week of 1731 tons. The makers are doing very little business in sales, but their quotations exceed those of merchants. The ironworks at Walker-on-Tyne were restarted on Monday, after a stoppage of five years. There are 36 puddling-furnaces on the premises, and 12 of these have been started and are now in operation. The rolling mills and the remainder of the puddling-furnaces will be started very shortly, and in the course of a short time it is expected that the whole of the works will be in operation.

At Middlesborough on Tuesday the market was rather quiet; there was a little improvement in prices, but only a shade. Messrs. Connal's stock continues to decrease. Meetings have been held in Cleveland and in Scotland respecting the reduction in the make of iron. The stocks in Cleveland have been reduced by 50,000 tons since September last, while stocks have increased in Scotland by about the same amount. It is, therefore, contended that the Scotch masters have not reduced the make sufficiently, and it is evident that some new arrangement is necessary to be made between the masters in the tin districts when the present arrangement expires at the end of March next.

The proposal made by the miners' agents to sink more shafts for working large areas of coal is, we believe, sound to a certain extent, but the proposal to sink additional shafts at the limits of one mile appears to be extreme. On the other hand, the extension of the workings to four or five miles in some cases appears to be extreme on the other side. A limit of two or two and a-half miles would be more moderate, but, of course, no hard and fast line should be drawn. It is a serious matter the sinking of new shafts when the depth is great, and the cost of these shafts is clearly seen and appreciated, yet there are cases where new sinkings would be advantageous both on the score of economy and safety. The cost of making and maintaining sir ways and roadways of extreme length is very heavy, and this is always going on weekly and yearly, and this adds to the cost of raising the coal often to a serious extent. The question, therefore, is a choice of evils, and the sinking of extra shafts in some cases would, it is reasonable to suppose, vastly increase the facilities for ventilation, and also reduce materially the cost per ton of raising the coal.

NEW COAL CUTTING MACHINE.—Provisional protection has been granted to Messrs. Burnett and Sons, of Spennymoor, for a machine of this kind, which possesses some quite novel features of much interest. The apparatus is very simple in construction, but can be applied either for cutting down the whole seam of coal so as to produce coal suitable for coking, or the cutter can be so arranged as to cut a circular groove; large pieces of coal can thus be formed of any convenient size, and when the coal is wanted for steam or house purposes it is claimed that by using the machine a high percentage of round coal can be got. The apparatus consists of a motor and standard combined, through which passes a feeding screw. All the old coal cutting machines, most of which have failed in practice, were applied for the purpose of holeing underneath the seam of coal, the top coal being afterwards taken down by blasting, &c., in the ordinary way. It will be seen, therefore, that this machine aims at doing considerably more than simply holeing, and the trials which will shortly be made with the machine at a Durham colliery will be watched with much interest.

A general meeting of the Northern Institute of Mining and Mechanical Engineers was held at Newcastle on Saturday, under the presidency of Mr. G. B. Forster. Several papers were read, including one by Mr. W. J. Swan, "On an Electric Safety-lamp, with Portable Secondary Battery." Mr. Swan, owing to illness, was unable to attend, and the paper was read, and the portable electric lamp exhibited by Mr. J. B. Payne. The lamp gives out a light equal to two or three candles, and is so attached to the conducting wires that good contact was made with them, and the renewal of the lamp could be effected with great ease. The lantern is compact and light, and consists of few parts, of a simple and inexpensive character. In connection with the lamp exhibited there was the striking novelty of a portable electricity generating apparatus in the nature of a secondary battery contained in a small wooden box, which rendered the safety-lamp independent of main wires conveying current from a distant dynamo-electric machine. The dynamo-electric machine would still be required, for what was contemplated was that the portable secondary cells contained in the box should be taken to the dynamo to be charged by its action, and that after being so charged this portable store of energy should be sent into the workings on trucks, there to be connected with lamps. A set of cells as exhibited would keep the lamp burning for over one hour, and weighing about 20 lbs. would keep up a light for eight hours. The actual cost of supplying the current and keeping the lamps burning would be very small, probably not more than the first cost of pit lamps for oil, &c. The greatest cost, in addition to that of the lamp itself, would be for the plant for the dynamo and engine, for the boxes of cells, and the cost of haulage and apparatus. It was very possible and probable that the store cells might be improved, so as to render them less bulky and less costly. Some discussion took place on the lamp, and the question was raised whether an explosion would occur if the lamp were broken in a place where there was gas, and Mr. Payne undertook that Mr. Swan would make an experiment to test that point. On the motion of the President a vote of thanks was passed to Mr. Payne and Mr. Swan. There is no dobt that this lamp exhibited by Mr. Swan proves conclusively that he has made great progress towards producing a mining lamp of a practical kind, and ultimately he may succeed in producing a lamp which will excel existing lamps as to safety, and one which could be worked at a cost not more than that of the average lamps at present in use.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine sharedealer, Redruth (Feb. 16), writes:—Our market has been very quiet throughout the week. Carn Brea has fallen 2, Cook's Kitchen 1¼, Dolcoath 1, West Kitty ¼, and Wheal Agar 2. East Pool shares leave off at an advance of ¾, Killifreth ¼, and Pedn-an-drea ¼. Today Killifreths and Pedn-an-dreas are enquired for, but other mines continue quiet. At Wheal Grenville meeting on Tuesday a dividend of 7s. 6d. per share was declared. Prices are as follows:—Blue Hills, 1¾ to 2; Carn Brea, 20 to 20½; Cook's Kitchen, 28½ to 29½; Dolcoath, 80 to 81; East Blue Hills, 11s. to 13s.; East Pool, 45¾ to 45¾; Killifreth, 44s. to 46s.; Mellanear, 4½ to 5; New Cook's Kitchen, 4 to 4½; New Kitty, 1⅞ to 2½; Phœnix, 3 to 3⅛; Pedn-an-drea, 3*l.* 18s. to 4; South Condurrow, 9 to 9½; South Crofty, 8 to 8½; South Frances, 14¾ to 15; Tincroft, 16 to 16½; West Basset, 13½ to 14; West Frances, 11½ to 12; West Kitty, 8¼ to 8½; West Peevor, 14 to 14¼; West Poldice, 5¾ to 6; West Polbreen, 1¼ to 1⅝; West Tolgus, 20 to 25; West Seton, 14 to 15; Wheal Agar, 11 to 12; Wheal Basset, 5¼ to 5½; Wheal Grenville, 10¾ to 11¼; Wheal Jewell, ⅛ to ⅝; Wheal Kitty, ⅝ to ⅞; Wheal Prussia 1 to 1⅛; Wheal Uny, 3¼ to 3¾.

— Mr. J. H. REYNOLDS, stock and share broker, Redruth (Feb. 16), writes:—During the week business has been rather restricted, and prices in most instances have given way. East Pools have dropped from 47¾ to 45 on the water in the adjoining mine, Wheal Agar, being steadily rising, and fears being entertained of its finding its way into East Pool. Dolcoaths have also dropped 5*l.* on the week. Pedn-an-dreas and Killifreths in demand at an advance. Subjoined are the closing quotations:—Blue Hills, 1¾ to 2¼; Carn Brea, 21 to 22; Camborne Vean, 7s. to 10s.; Cook's Kitchen, 29 to 30; Dolcoath, 80½ to 81½; East Pool, 45⅛ to 46; East Blue Hills, 10s. to 15s.; Killifreth, 2¼ to 2⅜; Marke Valley, 1 to 1¼; Mellanear, 4½ to 5; New Cook's Kitchen, 4¼ to 4½; New Kitty, 2 to 2¼; North Busy, ¼ to ½; North Herodsfoot, 7s. 6d. to 10s.; North Pensthruthal, ½ to ⅝; Pedn-an-drea, 3⅞ to 4; Phœnix, 3⅛ to 3⅜; South Condurrow, 9½ to 10; South Crofty, 8½ to 9; South Frances, 14¾ to 15; Tincroft, 16 to 16½; West Basset, 13¾ to 14; West Frances, 11½ to 12; West Kitty, 8¼ to 8½; West Peevor, 13½ to 14; West Polbreen, 1 to 1¼; West Poldice, 5¾ to 6; West Seton, 14 to 15; West Tolgus, 20 to 22; Wheal Agar, 11½ to 12; Wheal Basset, 5¾ to 5¾; Wheal Boys, 2 to 2⅛; Wheal Grenville, 11¼ to 11⅜; Wheal Hony and Trelawney, 2 to 2¼; Wheal Jewell, ¼ to ½; Wheal Kitty, ½ to ¾; Wheal Peevor, 9¾ to 10¾; Wheal Prussia, 1 to 1¼; Wheal Uny, 3¼ to 3½; Wheal Jane, 1 to 1¼.

— Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (Feb. 16), write:—Very little business has been done during the past week, and prices do not show any material alteration. Wheal Agars have been pressed for sale in consequence of difficulty in keeping the water; this has also damaged East Pool. There has been a fair enquiry for Killifreths and Pedn-an-dreas. Closing quotations annexed:—Blue Hills, 2 to 2½; Carn Brea, 21 to 21½; Cook's Kitchen, 29 to 30; Dolcoath, 80 to 81; East Blue Hills, ½ to ¾; East Pool, 45½ to 46; East Uny, ¾ to 1; Killifreth, 2½ to 2¾; New Kitty, 2 to 2¼; Pedn-an-drea, 3⅞ to 4; Santa Gertrude, 170 to 175; South Condurrow, 9½ to 10; South Crofty, 8 to 9; South Frances, 14½ to 15; Tincroft, 16 to 16½; West Basset, 13½ to 14; West Kitty, 8½ to 8¾; West Poldice, 5½ to 6; West Peevor, 13½ to 14; West Polbreen, 1 to 1½; West Frances, 11½ to 12; West Tolgus, 20 to 25; West Seton, 14 to 16; Wheal Agar, 11½ to 12; Wheal Basset, 5 to 5½; Wheal Grenville, 11 to 11½; Wheal Peevor, 10 to 10½; Wheal Kitty, ⅛ to ¾; Wheal Uny, 3¾ to 3½.

— Mr. M. W. BAWDEN, Liskeard (Feb. 16), writes:—The mining market has been quiet during the past week with sellers of most of the leading shares at reduced prices. The decline on the tin standard and intervening of the usual settlement has also had a tendency to lower prices. Phœnix United add Wheal Uny in demand, and shares firmly held for an advance. At Wheal Grenville meeting held in London on Tuesday a dividend of 7s. 6d. per share was declared. Closing quotations are annexed:—Bedford United, 1¾ to 1⅞; Carn Brea, 21 to 21¼; Cook's Kitchen, 29½ to 30; Dolcoath, 80½ to 81; Devon Consols, 7¼ to 7¾; East Caradon, ⅜ to ½; East Herodsfoot, ¾ to 1; East Pool, 45 to 45½; Gawton United, ⅝ to ¾; Glasgow Caradon, ⅞ to 1; Gunnislake (Clitters), 2⅞ to 3; Herodsfoot, ¼ to ⅜; Hingston Down, 1½ to 1¾; Killifreth, 2½ to 2¾; Marke Valley, ⅞ to 1; New West Caradon, ¼ to ⅜; North Herodsfoot, ¼ to ⅜; Old Gunnislake, ⅛ to ¼; Phœnix United, 3½ to 3⅝; Prince of Wales, ⅝ to ¾; South Caradon, 25 to 27½; South Condurrow, 9½ to 10; South Crofty, 8½ to 9; South Devon United, 1 to 1⅛; South Frances, 15 to 15½; Tincroft, 16 to 16½; West Basset, 13½ to 14; West Caradon, ½ to ⅝; West Frances, 11 to 11½; West Mary Ann, ¾ to 1; West Crebor, ¼ to ⅜; West Phœnix, ⅞ to 1; Wheal Agar, 12½ to 13; Wheal Basset, 5¼ to 5½; Wheal Crebor, 2¼ to 2½; Wheal Grenville, 11¼ to 11¾, x. d.; Wheal Hony and Trelawny, 2 to 2⅛; Wheal Jane, 1 to 1⅛; Wheal Peevor, 9½ to 10; Wheal Uny, 3½ to 3¾.

— Mr. JOHN CARTER, mine sharedealer, Camborne (Feb. 16), writes:—Prices have again declined in tin market. Dolcoaths have been sold down to 80, Carn Breas at 20, South Frances at 14⅞, East Pools at 45½, Cook's Kitchen at 29, Wheal Agars at 12, and West Frances at 11½. Killifreths improved to 2¼ buyers, but are weaker at close of the market to-day. Pedn-an-dreas have also been in good request at from 3⅞ to 4, and close firm. East Blue Hills have also been in request. Quotations annexed:—Carn Brea, 19¾ to 20¾; Cook's Kitchen, 29 to 30; Dolcoath, 80 to 81; East Pool, 45½ to 46; East Blue Hills, 12s. 6d. to 15s.; Killifreth, 2½ to 2¾; Mellanear, 3⅞ to 4; New Cook's Kitchen, 4 to 4½; New Kitty, 2 to 2¼; Pedn-an-drea, 3⅞ to 4; South Condurrow, 10 to 10½; South Crofty, 8 to 8½; South Frances, 14¾ to 15; Tincroft, 16 to 16½; West Basset, 14 to 14¾; West Frances, 11¼ to 11¾; West Peevor, 14 to 14½; West Poldice, 5¾ to 6; West Seton, 12½ to 15; West Tolgus, 20 to 22½; Wheal Agar, 11½ to 12; Wheal Basset, 5½ to 5¾; Wheal Grenville, 11¼ to 11½; Wheal Peevor, 9½ to 10; Wheal Kitty, ⅜ to ⅞; Wheal Uny, 3¼ to 3½; West Kitty, 8⅛ to 8⅜.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, sharebrokers, Queen's Chambers, Market-street (Feb. 16), write:—We have again a very quiet market to report for the past week. What business has been marked is of a straggling character, but on dealings some amount of steadiness is noticeable in prices obtained. Speculation is restricted by the value of money, assisted by uncertainty as regards foreign politics, but home securities commend themselves to investors from the anticipation of a steadily growing general trade, which must of necessity favourably influence rails. The effect of the late financial crisis has undoubtedly been the clearing of the commercial atmosphere, and though checking for a time undue speculation, has had in that direction a beneficial influence on the markets. Prices in other than rails are changed for the worse numerically, but there are only one or two instances where the declines are of moment.

BANKS.—In these shares steadiness prevails, with a moderate number of lots changing hands; indeed the transactions herein place this class as about the most active of the series of investments under comment. The following are higher:—Bank of Liverpool, ½; Manchester and Liverpool District, ½; Union Bank of Manchester, ½; and Manchester and Salford, ½. There are no instances of decline.

INSURANCE shares keep flat, with very little doing indeed. Alterations in quotations show an overwhelming majority of adverse movements, but only in a few cases are the changes severe. Manchester Fire (now quoted ex div.), which have been more or less gradually declining for some time, mark a sharp fall, as also do Ocean Marine and United Fire Re-Insurance, new. Higher:—Equitable Fire, ½; Lancashire and Yorkshire Accident, ½; and Sea, 1/16. Lower:—Manchester Fire, ½ (have been lower still); Ocean Marine, ½; United Fire Re-Insurance, new, ½; British and Foreign Marine, ½; Lancashire and Staffordshire Fire, ½; Royal (Liverpool), ½ (now ex div.); English and Scottish Boiler, 1/16; Maritime, 1/16; and Queen, 1/16.

COAL, IRON, &C., AND MINING.—A very trifling number of transactions is reparted, business being still restricted herein. Prices have moved irregularly, but balance remains adverse. Bolckows are contradictory, the fully-paid showing better, whilst the 12*l.* paid quote lower. Canadian Coppers almost neglected, but exhibiting a slight advance in quotations. Tredegar Coal, &c., of both issues are lower, the "B" especially so.—Higher: Parkgate, ½; Bolckow (fully-paid), ⅛; Cammell, ½; A. Knowles and Sons, ⅛ (now ex div.); and Canadian Copper, &c., 1s.—Lower: Tredegar Coal, &c., "B," 1¼; ditto "A," ½; Tharsis Sulphur, &c., ⅞; Sheepbridge Coal, &c., ½; Pelsall Coal, &c., ¼; Patent Nut and Bolt, ¼; John Brown, ¼; Ebbw Vale, ¼; Earle's Shipbuilding, ¼; Bolckow (12*l.* paid), ⅛; and Bilbao Iron Ore, ⅛.

COTTON SPINNING AND MANUFACTURING.—This market presents a state bordering on stagnation, still prices keep very fairly steady, and buyers find sellers very loth to make any appreciable concession except in cases of forced sales. Trade advices keep unsatisfactory, but no uneasiness is felt for the future of this industry.

TELEGRAPHS AND TELEPHONES.—The former are, with the exception of West Indian and Brazilian, lower; Anglos, deferred and preferred, being foremost in the declines; others only fractional. In the latter movements contradict each other, Lancashire and Cheshire showing a further rise, whilst Uniteds are ½ down.—CORPORATION, STOCKS, &c., and CANALS are without change, and little doing in either.—MISCELLANEOUS do not afford any feature worthy of notice. Barlow and Jones (Limited) and Bradbury and Co. (Limited) both announce dividends at the rate of 10 per cent. Union Plate Glass are quoted 1. Southport Winter Gardens, 3/16; Zoedone, ⅛; and Westheads ½ down.

RAILWAYS.—The week has been one of quietness, but for English and Scotch lines prices are better. Money has shown signs of ease, and the carrying over day proved the market to be decidedly "bear." Now that most of the important securities are quoted ex div., the impression is that with the quiet and steady growth of trade, particularly in the iron centres, there will be a recovery in prices. North British have been particularly active, with fluctuations as numerous as usual. Canadian markets are steady, with only slight variations in prices, pending the announcement of the Grand Trunk dividends. Americans are again moving downward, arising from the uncertain position of "bull" operations on the other side, and affected by the failure of grain speculators.

HULL.—Mr. W. FOWLER SUTTON, stock and share broker, St. Mary's Chambers (Feb. 16), writes:—The railway market has shown decided steadiness this week, and most stocks are decidedly higher. No change has been made in the Bank rate of discount, but it is probable that if gold continues to flow in as it is doing now next Thursday will see the rate down to 5 per cent., and considerably more activity in all our markets will undoubtedly ensue. The foreign market keeps unsettled, and there is no doubt large blocks of stock have still to be digested before anything like buoyancy reappears. American rails are flat, in consequence to some extent of dearer money. Local stocks firm. Hull Banks, 12¼ (ex div.); London and Yorkshire Bank, 39s. (ex div.); Yorkshire Bank, 28½; Hull Docks, 77 (ex div.); Hull Tramway, 8¾; Earle's Shipbuilding, 23¾; Hull and Barnsley Railway, ¾ (2*l.* paid).

NEWCASTLE-ON-TYNE.—Mr. FARADAY SPENCE, stock and share broker, Grey-street (Feb. 16), writes:—During the past week this market has been quiet but firm. Bede Metal and Chemical shares are in demand at ¼ dis., whilst sellers ask par. Bolckow, Vaughan, and Co.'s 20*l.* paid shares are 27½ to 27¾, 12*l.* paid shares, 4⅜ to 4⅝ prem., and 5 per cent. preference shares, 21 to 21¾. Consett Iron shares have been done at 17⅞ prem., ex div. Consett Spanish ores are 31s. to 31s. 6d. Darlington Iron shares are in demand at 4½, whilst sellers ask 4¾. John Abbott and Co.'s shares are offered at 25 dis., whilst 30 dis. is best bid. Palmer's Shipbuilding and Iron A shares are 30½ to 31½, and B shares 3½ to 3¾ dis. Skerne Irons are easier, being offered at 3 9/16, whilst 3¾ is best bid. Teesside Iron and Engine Works shares are also easier, the ordinary being 2 to 2½, and preference 1/16 to ⅛ prem. Tyne Forge shares are in demand at 5 prem., ex new, whilst there are no sellers at the moment. The new shares are offered at 6 prem., whilst 4½ prem. is bid. West Cumberlands are 6⅝ to 6¾ dis.

Crookburn Mine shares are nominally ⅜ to ¼ dis. The directors have just given notice of a call of 2s. per share, which I am afraid will have the effect of bringing more sellers on the market. Dubby Syke Mine shares are offered at 1s. each without tempting buyers. Green Hurth Mine shares are 7⅛ to 7¼. Hexham and Edmonbyers Mine shares are about 15s. each. North Green Hurth Mine 1*l.* paid shares are offered at 1¼, and the 2s. 6d. paid at ⅜ prem., without tempting buyers.

Messrs. J. S. CHALLONER and SON, stock and share brokers, Dean-street, Feb. Feb. 16) write—West Cumberlands remain 13¾, Bolckow 20*l.* paid are 27½, and 12*l.* paid 16¾. Chillington Irons 3½, Darlington Irons 4¼, Barrow Steel 130, 6 per cent. pref. 11; Palmer A 31, and B 21½; Teeside Iron 2*l.* 3s. 9d., and pref. ½ prem.; Lawes 5, Langdales 3¾, North-Eastern Banks 1¾ dis., Newcastle Gas 150, and Swan's Electric Light ¼ dis.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, sharebroker and ironbroker (Feb. 16), writes:—During the past week prices have generally declined, owing to the absence of business, but the influence of favourable weather and easier money market, as well as a more settled state of foreign politics, is likely to bring about an improvement.

In shares of coal, iron, and steel concerns, Marbellas are exceptionally higher at 6¾ to 6⅞, but the others are all lower. In the Scotch pig-iron market the price of warrants was dull—about 48s. 10d.—but has since improved to 49s. 9d., owing to the easier tendency in the money market and the prospect of the agreement between the Scotch and Middlesborough ironmasters for reducing the output, which expires next month, being renewed; and the Scotch ironmasters are to be asked to restrict their output still more, as it appears during the currency of this agreement their stocks have increased by about 50,000 tons, while those at Cleveland have declined to a similar extent. Another thing in favour of the market is the break up of the American Grain Ring, which will make tonnage to that country more plentiful, and by bringing down the freights for pig-iron will increase the shipments to that country. Bilson and Crump are at 25s. Cardiff and Swansea, 55s. to 65s.; Chatterley Iron, 8¾ to 9¼; Llynvi and Tondu, 8 to 10; and ditto, pref., 72s. 6d. to 75s.

In shares of foreign copper and lead concerns prices have also declined. Tharsis improved to 43*l.* 6s. 3d., but have since declined to 41½. Bratsberg are at 30s. to 40s.; Canadian, 26s. to 27s.; Huntingtons, 38s. to 39s.; Norway Copper, pref., 12s. 6d.; Pierrefitte, ordinary, 12s. 6d.; Rio Tinto, 24¼; Sentein, 10s.; and Yorke Peninsula, ordinary, 3s. 6d. to 6s. 3d.

In shares of home mines business has been restricted owing to the unfavourable tendency of the metal markets. Caron are at 3s. 9d.; Carnarvon, 15s. to 17s. 6d.; Carpella, 5s.; Carn Camborne, 10s. to 15s.; Devon Copper and Blende, 12s. 6d. to 17s. 6d.; Drakewalls, 10s. to 15s.; Devon Friendship, 7s. 6d. to 10s.; D'Eresby Mountain, 20s. to 30s.; East Wheal Rose, 12s. 6d. to 17s. 6d.; East Craven Moor, 5s.; East Chiverton, 27s. 6d. to 32s. 6d.; East Caradon, 6s. to 7s. 6d.; East Van, 10s. to 15s.; Gawton United, 15s. to 20s.; Gunnislake (Clitters), 57s. 6d. to 62s. 6d.; Great Holway, 4½ to 5½; Herodsfoot, 4s. to 6s.; Lady Ashburton, 2s. 6d. to 5s.; Langford, 7s. 6d. to 10s.; Morfa Du, 10s. to 15s.; Mounts Bay, 12s. 6d. dis.; North Busy, 6s. 6d.; North D'Eresby, 5s.; Old Shepherds, 10s. dis.; Old Owlacombe, 5s. to 7s. 6d.; Phœnix, 60s. to 65s.; Pary's, 12s. 6d. to 15s.; Pen-y-Orsedd, 10s. to 15s.; Pandora, 10s. to 15s.; Parkas, 3s. 9d. to 5s.; Royalton, 17s. 6d.; South Devons, 20s. to 25s.; South Crebors, 3s. 9d. to 6s. 3d.; Tankerville, 5s. to 7s.; Tin Hills, 15s. 6d.; Tamar, 12s. 6d.; West Crebor, 5s. to 7s.; West Chiverton, 5s.; West Phœnix, 12s. 6d. to 17s. 6d.; Wheal Crebor, 50s. to 60s.; Wheal Jewell, 7s. 6d. to 10s.; and Wheal Lusky, 5s. 6d.

In shares of gold and silver mines Richmonds have declined to 10*l.* There is also a reduction in Indian Golds from 10*l.* to 9*l.* per share, owing to the issue of their report, which appears very doubtful in some respects. Akankoos are at 5s. to 7s. 6d.; Anglo-California, 3s.; Central Wynaads, 12s. 6d.; Colombian Hydraulic, 7s. 6d. to 10s.; Consolidated, 2s. 6d. to 5s.; Dingley Dell, 15s. to 20s.; Exchequer, 2s. 6d. to 5s.; East Shebovgan, 3s.; Flagstaff, 2s. 6d. to 5s.; Great Southern of Mysore, 3s.; Gold Coast, 5s. to 7s. 6d. prem.; I. X. L., 2s. 6d. to 5s.; Indian Glenrock, 20s. to 22s. 6d.; Indian Kingston, 7s. 6d. to 12s. 6d.; La Plata, 42s. 6d. to 45s.; London and California, 3s.; Mysore Reefs, 5s. to 7s. 6d.; New Gold Run, 3s. to 5s.; Olathe Silver, 5s.; Potosi, 12s. 6d. to 15s.; Quartz Hill, 2s. 6d. to 5s.; Rio Grande do Sul (B), 70s.; Simons Reef, 5s. to 7s. 6d.; and Utah Silver, 3s.

In shares of oil and miscellaneous companies the principal movement is an advance on Uphall Oils to 8*l.* 13s. 9d. Clyn-gwyn Slate debentures are at 10; Diamond Mining Corporation of London and South Africa, 40s.; Glasgow Coal Exchange, 20s.; Oakbank Oil, 41s.

BENHAR COAL COMPANY.—The meeting of this company will be held on Feb. 21, and the liquidators statement, as at Dec. 31, states the liabilities were 174,000*l.*, besides 13,000*l.* disputed claims. The assets are estimated at 70,000*l.*, thus leaving 104,000*l.* to be got for the collieries before 20s. in 1*l.* can be paid to creditors alone, without allowing for claims in dispute, liquidation expenses, &c. The year's operations show a gross profit of 16,658*l.*, but of this 12,027*l.* was expended on works which in ordinary circumstances would have been charged to capital. The balance of 4631*l.* is almost entirely expended in satisfaction of preferable claims. The output from the Benhar Collieries increased by 10,000 tons, while from Niddrie at least 10,000 tons less were got than they should have been, but in the future they expect to raise 50,000 tons a year of cannel from the latter, and will yield good profits.

EDINBURGH.—Messrs. THOMAS MILLER and SONS, stock and share brokers, Princes-street (Feb. 16), write:—The market has been in an unsettled state during the greater part of the past week, but the supply of money having become more abundant, two days ago a distinct improvement took place there, which has been maintained. Since Wednesday last Caledonian Railway stock has risen from 108⅞ to 110; North British, from 93½ to 94⅝; Glasgow and South-Western, from 121¼ to 121½; Great North of Scotland, from 61 to 62. Most English ordinary stocks are also higher, but Metropolitan District have fallen from 63½ to 60½; North British 4½ per cent. Debenture stock has fallen from 110 to 108, and a few preference stocks are lower. In Canadian shares Grand Trunk Second Preference has risen from 79¾ to 80; and the Third, from 33¼ to 34 5/16. American shares are not much changed. In banks Clydesdale shares have fallen from 24¾ to 24½, National from 299 to 298, Royal from 209 to 208, and Union from 25 to 24 11/16. In property shares Scottish American Investment have fallen from 88s. 6d. to 87s., and Scottish American Mortgage have improved from 68s. to 68s. 6d. In mines Rio Tinto have declined from 24½ to 24¼, Tharsis from 43⅝ to 42, and Clyde Coal from 58s. 6d. to 52s. Prairie Cattle shares have receded from 9¼ to 8⅞.

IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (Feb. 15), write:—There was no change of consequence in prices to day. Great Southerns again changed hands at 109¾, and Northerns were done at 118. Midlands were also bought at 82¼, but there was no change in Limericks or Bandons. National Banks changed hands at 23, and Munsters at 61 5/16. Hibernians were also done at 35½. No change in Provincials. Cork Steam Packets remain 10½ to 10⅝, and Gas shares 6¾. Lyons fully-paid shares were asked for at 6, and Gouldings were done at 8. Harbour Board debentures unchanged.

INDIAN GOLD MINES—THE GOVERNOR'S VISIT TO THE WYNAAD.

The Governor's tour in the Wynaad appears to have given him great satisfaction, and the favourable views he has expressed cannot fail to prove reassuring to British capitalists interested in Indian gold mines. On Jan. 12 his Excellency drove from the house of Mr. J. O'Donoghue, the manager of the Indian Gold Mines at Nadgane, to the South Indian Gold Mines at Pundalur, where he will be the guest of Colonel Howard, the Chairman of the Company. On his way through Pundalur, he visited the now famous lode in No. 5 tunnel, on the estate of the South East Wynaad Gold Company, just opened out by their able engineer, Mr. Cooper. The Governor and staff were very much pleased with all they saw, more especially with the grand show of rich ore laid open to view, both inside and outside of the tunnel. From the tunnel the party went to the reduction works (now in a very forward state), where Mr. Copper explained everything very clearly. On leaving the works, the Governor drove to the Miners' Institute, where he was received by Col. Howard; W. R. Moore, M.E., managing director of the Kingston Mine; J. J. Copper, M.E., manager of the S. E. Wynaad Company; Mr. Groves, manager of the Phœnix; Col. Henderson, manager of the Consolidated Company; H. V. Ryan, coffee planter; and many others. A very substantial tiffin was provided, after which Colonel Howard proposed the usual loyal toasts, and then the health of the Governor, who, in reply, thanked the company in the usual terms for the very kind manner, &c., &c., and remarked that he was most happy to tell them that his spirits had been raised in a most remarkable manner

by what he had just seen in the mine of the S. E. Wynaad. He also said:—"Gentlemen, having had my spirits raised by what I have seen, I will now try and raise yours, by telling you that this very morning I have received a communication from the Secretary of State, sanctioning a very material improvement in the mining laws of this country, and I hope by the time I reach Vythery I shall be able to give more information on the subject." After luncheon and a hearty good-bye to the company, Mr. Grant Duff drove off to the South Indian Gold Mines. He will examine the works of the company, and there is little chance of his spirit being again depressed by anything he will see there.

The Governor and his party left Cherambadi on Jan. 21 after breakfast, reaching the Ripon later than had been expected. His Excellency, says the Madras Times, inspected the works, and sundry specimens of visible gold were exhibited to him. After seeing all that was to be seen the party proceeded to Panorah, where it was arranged for his Excellency to rest that night and the following day. A very effective salute of 17 guns (?) was produced by means of charges of dynamite. Yesterday his Excellency went for a long botenising expedition up Chumbera peak, accompanied by Mr. W. Morgan, of the Forest Department. His Excellency expressed himself as delighted with our scenery and the floral treasures of our jungles. His party passed the time at the Panorah top bungalow by playing lawn tennis, and in the evening all returned to the lower bungalow for dinner. Major Meade and Colonel Sankey have combined business with pleasure, by carefully inspecting the country with a view to deciding upon the feasibility of a railway through Wynaad. We are exceedingly hopeful about this, and rejoice much at the pleasant prospect so possibly in store for us.

Meetings of Public Companies.

RUBY AND DUNDERBERG CONSOLIDATED MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel, on Monday, to pass certain special resolutions relative to the raising of fresh capital.

The chair was occupied by Mr. W. A. MALCOLM (the Chairman of the company).

Mr. J. FORSTER HAMILTON (the secretary) read the notice calling the meeting.

The CHAIRMAN said the circular which had been sent to the shareholders by the directors, explanatory of the propositions to be placed before the meeting to-day, was so clear that but few remarks on his part were necessary. It had been for a long time under the consideration of the directors as to the best way to obtain the necessary working capital. Various propositions were before them; and the only scheme which the directors had in their hands, given by the Articles of Association, without the consent of the shareholders, was that of placing before the shareholders the unissued portion of the debenture fund. That was done with but few applications, owing to the fact that there was some little objection to the then directors; but even had that amount of money been raised by means at their disposal, the directors would not have had sufficient for the work to cope with the very large area of property which the company possessed, and which they must work before they arrived at a result which would enable them to pay a dividend. For that purpose they had further to look. In the first place they could only look to the shareholders, whose difficulties were at that time increased by the depreciation in the price of the shares; but, nevertheless, the scheme which was now before them was the one which the directors at one time entertained as that which they hoped to place before the shareholders at a better price. This scheme did not interfere with the rights of the shareholders, nor with their profits. The new shares would be offered to the shareholders, and if the company made a profit he should be sorry to see the shareholders, who had seen the shares depreciating in value, lose the last chance of recouping themselves, and putting the concern on a sound footing. (Hear, hear.) The capital which would be obtained under this scheme—and he might mention that if it were not provided by the shareholders there were outsiders ready to come forward and take it up—would be amply sufficient to fully develope the property. These properties might not be fully known to the shareholders, and, therefore, in the rough sketch map accompanying the circular, the directors had endeavoured to place before them the various mining properties which the company held in and about the township of Eureka. Many of these properties had hitherto been lying idle and fallow—an untilled field; but with the capital which the company would now possess they would be able to place in proper working order many of the outside mines. With this capital properly secured and at their disposal, it was the intention of the board at once, under competent advice to prosecute the Dunderberg and Atlas Mine, and as soon as that mine was opened up to prosecute the Home Ticket Mine from above, by opening up on the old workings, and following down the lode, which was extremely strong. They had on the Bullwhacker Mine at the present time a small engine, which could easily be taken to the Home Ticket Mine, and by that means they could explore the Home Ticket throughout, and follow it down until they came to the rich deposits which were believed to exist at a lower depth, and which had been sought by the 300 west cross-cut from the Dunderberg. They had not hitherto got at that ore, but by following it down they believed they would come upon the rich ore which was believed to be there. They also proposed to develope the Lord Byron Mine, which had been described as rich, and which had been worked from surface, and rich ore taken from it. It was not proposed to put up expensive machinery, but to tunnel at the contact of the shale and limestone, and penetrate to the centre of the hill, and then go down. It was thought this would be cheaper than going from the upper workings. By means of these mines which they were going to place in working order, and by means of the ore which they would find in the Dunderberg in larger quantities, they would be able to meet the increased capital which was imposed upon the company. Therefore, he should rather contend that the increased capital was an advantage, for it was a nominal amount, and what they had to do was to pay a dividend on the shares, whether they were 10*l.* shares or 5*l.* shares. Every penny of those shares were held by the holders at the nominal price of 10*l.* He was, unfortunately, a holder at that price. The practical result of the issue of these 1*l.* shares was this—that these 1*l.* shares ranked in all respects for distribution of dividend, and practically took the form of 10*l.* shares, and if any person paid for an original 10*l.* share he would have two 10*l.* shares for 11*l.*; practically they would have two 5*l.* 10s. shares. In conclusion, the Chairman moved the first resolution:—"That the capital of the company be increased to 225,300*l.*, by the creation of 25,330 new shares of 1*l.* each, to be called new shares, each new share to entitle the holder thereof to a dividend equal in amount with the dividend on each of the original 10*l.* shares in the company, and the new shares, in all other respects, to give the same rights and privileges as the original shares."

Gen. D'OYLY seconded the motion.

A SHAREHOLDER asked whether the directors had taken counsel's opinion as to the practicability of giving effect to this scheme, and whether there might not be some legal liability attaching to the holders for the remainder of capital?

Mr. CROWE asked whether he understood that, in the event of shareholders not taking all the shares, outsiders were prepared to make up the amount of the full issue?——The CHAIRMAN said that, as a matter of course, before issuing this scheme the directors had taken competent legal advice, and the unanimous opinion was that there was no liability attachable to these shares, provided they were issued in the manner proposed. There were outside people perfectly willing to take up any shares which were not taken by the shareholders.

Mr. BLADON said there could be no doubt the directors could issue the shares in the manner proposed.

A SHAREHOLDER asked whether all the money would be expended on the development of the property, or whether any portion would be expended in payment of a gentleman who, he understood, held a lien upon the property.

The CHAIRMAN said the money would be expended wholly in the development of the property, and of course in paying off any debts which might exist in Eureka; but none would be devoted to paying off the lieu which had been referred to, as that particular debt had been settled by arbitration, and the gentleman would be settled with by the payment of debentures. (Hear, hear.)

Mr. GEO. BATTERS said he should like to know how the directors intended to carry on mining operations in future. When the proposed new capital was raised they were told that there would be ample to develope the property, and he should like to know something more as to the *modus operandi* in future, and also something about the management in Eureka? He should not like to see them resorting to smelting at present, nor for a considerable time, because he knew they could sell ore to almost as good advantage as by smelting it, especially if they had a good quantity to deal with. Did the directors intend placing a practical man at the head of affairs who understood mining in this particular district. Mining in the limestone formation, from the nature of the rock, necessarily required a particular knowledge of the locality, and especially was that the case in Eureka, and he believed it would be extremely satisfactory to the shareholders generally if they could secure the services of Mr. R. Rickard, the late manager of the Richmond, who had brought that mine to such a great success. (Cheers.) He believed that Mr. Rickard intended returning to the Pacific Coast, and although not taking so active a part as hitherto in mining matters, still intended to devote his life to it. He believed it would be a good thing for the company if Mr. Rickard could be engaged to visit the mine one day a month, or two days a month, and go underground and see for himself what was being done. His own opinion as to the future had not been shaken in the Eureka districts. There were facts which had crept up which spoke wonders for the Ruby and Dunderberg—the discoveries in the Eureka tunnel, which was being carried out very many feet below this mine, which was situated on the top of the district or formation in which other mines were located. As regarded the scheme for raising the capital, he thought it was just and equitable, and must commend itself to every shareholder. (Hear, hear.) The calls were by easy instalments of 2s. 6d. each, and he believed there were few shareholders who would not avail themselves of the scheme, and thus have a chance of getting back their money.

A SHAREHOLDER thought it was inexpedient to nominate Mr. Rickard at a public meeting. They had confidence in the directors, and must leave them to appoint a manager.——Mr. GEO. BATTERS said he was afraid he must have been misunderstood; he merely wished to suggest that Mr. Rickard was a most desirable man to be connected with the management, and simply threw it out as a suggestion to the directors. (Cheers.)——Mr. BLADON said that Mr. Rickard was well known in connection with the Richmond property, and no doubt if he were connected with this property it would have great weight with the public. (Hear).

Mr. DICKSON (a new director) thought the shareholders ought not in any way to tie the hands of the new board. No doubt Mr. Rickard was a renowned miner in the Nevada district; but at present this company had a manager whom the directors had engaged for a year, and it was fair to see what he could do.

Mr. BATTERS said he simply meant to suggest that Mr. Rickard might be engaged as consulting engineer. He had no wish to force it upon the meeting.

Mr. HEIRON (director) said that as an old shareholder in the Richmond Company he knew how much the shareholders there were indebted to Mr. Rickard, and he could only say that if he thought that Mr. Rickard was going to be connected with the Ruby and Dunderberg, he would himself subscribe for half the proposed new issue of shares. (Cheers.)

The CHAIRMAN said he thought it rather premature to bring forward the question of the appointment of a manager; that was a distinct business for the directors to look to. (Hear, hear.) It was known that for many years Mr. Rickard had been the consulting engineer of this property, and he believed that, with the small capital at his command, no man could have done what Mr. Rickard did, or have placed the mine in such a position. (Cheers.) He knew that Mr. Rickard would give the company the invaluable benefit of his services. The directors had been in communication with Mr. Rickard, and certain satisfactory terms had been proposed, and when the money was obtained no doubt some satisfactory arrangement could be arrived at. (Cheers.) In reply to an observation by one of the speakers, he might add that there was no fear of the new issue not being taken up, for there was now in the office an offer to take the whole 25,300 shares in the event of the shareholders not coming forward. (Cheers.)

The first resolution was then put and carried.

The CHAIRMAN then moved the second resolution—"That the new shares shall be offered in the first instance to the holders of the original shares in the proportion of one share for every original share held, and any new shares not taken up may be allotted by the directors to such persons and on such terms as they shall think fit."——Mr. PADDON seconded the motion.

The CHAIRMAN, in reply to a question, said that if any of the shareholders did not take up their *pro rata* proportion such surplus would, in the first instance, be allotted amongst the other shareholders who applied for them.

The resolution was put and carried.

The CHAIRMAN moved the third resolution—"That the new shares shall be paid for at such time or times, and by such instalments or otherwise, as the directors shall appoint."——The resolution was put and carried.

Mr. RICKARD, in reply to Mr. GEORGE BATTERS, said that if he had charge of the mine, he would do his best to make returns to the shareholders. (Cheers.)

A vote of thanks to the Chairman and directors closed the proceedings.

SINCLAIR LEAD AND BLENDE MINING COMPANY.

The statutory meeting of shareholders was held at the offices of the company, Queen Victoria-street, on Monday,

Mr. JOHN SAMPSON PEIRCE, C.E., in the chair.

Mr. HERBERT R. DUKE (the secretary) read the notice convening the meeting.

The CHAIRMAN: Gentlemen, you have heard the notice just read by our secretary convening this meeting. The remarks that will be required from me on an occasion like this will necessarily be very short, and I shall not intentionally make them shorter than I think is perfectly necessary, but they must be brief, because we do not come before you except as it were in compliance with the statute. We come within a very short time of our having been certified, and, in accordance with that certificate, and with the clause already read out to you, we are before you to place ourselves in a proper legal position. We were registered on Oct. 14, 1881, and we are just within the four months necessary. I perhaps need only tell you on the present occasion that the company is in full possession of the property on which we propose to work, and as regards which we have entered into an arrangement to take it over. We have commenced our work, and in order to carry it out efficiently, we have already purchased an engine for the sum of 350*l.* That is the first purchase of any consequence we have made. That engine, allow me to say, has not been purchased in a hap-hazard way, or by an amateur, or by the words and recommendation of the man who is selling it. We have the advantage to have on our board an expert in these matters—Mr. Thomas P. Gamble—and he went down and saw this engine, and it has been bought under his able advice. We have every reason to believe that it has been a most admirable purchase, for unless we are very much misinformed our 350*l.* has been laid out in a way that might have cost us from 560*l.* to 600*l.* We have begun sinking on what is called the Wacco portion of the property. I have every reason to believe with perfect truth, and say it in good faith, that our progress up to the present moment has been everything that has been desired. In trusting your property to me and my colleagues I can only say that at the present moment you must take promises. We are not novices at this kind of work—some of us. I am an engineer, and know pretty well the value of work and of machinery. I believe that we have got hold, quite apart from the machinery, of a property which I can tell you will not be developed on simply what is called an economical plan, because however good that may be theoretically, practically it does not always turn out to be the most economical thing after all, but developed vigorously. If we put up machinery we shall put it up with an eye to the future rather than to merely satisfying our temporary wants. I believe we have a very valuable property, and I am sure, looking at our surroundings—the Great Holway Mine being in our immediate vicinity—we cannot imagine that we can be unlucky enough to miss some of those riches of which the Holway Company is possessing itself. We believe it to be a valuable property, and that if the whole matter is carried on as it should be, by men of common sense, and men of business, we shall ultimately look back with a great deal of pleasure on the work that we have commenced in connection with this company. I think nothing more is needed to be said on this occasion, but in order that you may be possessed of any other matters that may interest you I think I cannot do better than call upon Mr. E. J. Bartlett (who stands in a position almost unique in the matter) to give you any explanation, or any further information in regard to the property *per se*, of which he may be in possession and of which I may not.

Mr. E. J. BARTLETT: Gentlemen: The Chairman has so fully explained the present position of the company that it leaves very few words for me to add. Although this company was introduced only four months since, it is the fulfilment of the earnest desire I have held for the past ten years, well knowing the very important discoveries that had been made at the western portion of the present grant. At about that time a company was in possession of a portion of this very extensive property, and money was raised to develope some of the proved lodes, and also, if possible, to secure the benefit of a discovery that had recently been made by the Gorsedd Company, from which very large profits were realised. They only possessed a small portion of the property which the Sinclair Company has acquired—less than half of the 400 or 500 acres we have now the right of mining upon. Of course, those acquainted with mining know that where a very rich property is proved other companies are frequently started in the expectation that the surrounding grants may be equally rich; but they will know also that very often this anticipation is disappointed in the result, and the very pleasing prospects with which they start often turn out to be fallacious. It is a matter to note, however, not only with regard to one vein but to several which traverse the Sinclair sett, that you may trace their course and productiveness for a distance of something like 3 or 4 miles. Take, for example, the Milwr lode; this lode which passes through the property, was sufficient for one company to start upon, and they gave it the name "Milwr Mine," from which in about ten years something like 500,000*l.* worth of ore was extracted. This vein has been partially proved at Sinclair in shallow levels. A second vein is that now proving so rich in the Holway Mine, returning from 60 to 80 tons of lead per month, and in the course of the next two months is likely to return from 100 to 200 tons per month. This vein can be traced from Holway right through into the Sinclair property. It would surprise you to be informed of the vast amount of money the old company spent in not being properly advised as to the position of their main shaft. Before they had time to get at the vein that proved so rich in the Gorsedd sett, the large t proprietor died, and the executors had no power to continue the working, consequently this portion of the property had to be abandoned. It was only after much trouble and difficulty that I was enabled to secure it, but having done so I was of opinion that it would be of little value unless I could obtain what is known as the Wacco Grant, the minerals of which belong to the Duke of Westminster. No words of mine can convey to you any idea of the probable productiveness of this portion of the property. It has long been sought after by many practical men, and it was only through influence in the right quarter that caused this Wacco portion of the sett to be included in the land held by the Sinclair Company. Besides the Milwr vein, there are the Seven Stars, and two east and west lodes. These it is most desirable we should prove, and afford a most liberal development, and you will recollect that, in referring thereto, the Chairman told you that the directors would do nothing in a niggardly spirit. We resolved to sink a shaft, and in four months we have carried it down 15 yards from surface. We propose to wall it with Aberdor stone, to prevent any surface water coming in. The next thing was to get a suitable engine, and the Chairman has called attention to the great bargain we have made. This engine will be sufficient for all our purposes. We purpose carrying the shaft down about 80 or 90 yards, and not attempt to strike the lode until then. This will bring us, by means of a vertical shaft, to the lode at a fair depth. I believe it will then give us from 50 to 60 tons of lead per month, with every convenience for working the side lodes. It will also be at the discretion of the directors during the time the shaft is being carried down, to secure returns from this portion of the property by throwing out cross-cuts at various depths at once to raise lead ore. Apart from this, I may state that during the last four months two other shafts have been got in readiness for working. One of them we have started at a depth 36 yards to drive upon the course of the lode, and I am glad to say we have met with rich ore. As regards the eastern section of the property to which I first made reference in my remarks to you, during the next month or six weeks we shall be able to start work without expense to the company, and raise lead by means of tributers. Probably they will take it at a price of about 5*l.* per ton, which will give us on the ore raised quite 3*l.* a ton profit. There is practically no limit to the number of men we may be able to employ in this way without expense to the company, so that long before the summer months I believe we shall be in a prosperous condition—having the necessarry shafts finished, and airways completed, and every convenience for the transit of stuff to surface. There need not be any delay in carrying out development works, and of the result I feel very certain. Several of the shareholders have visited the mine, and I have here a letter from one gentleman who applied for a considerable interest, and who resolved to satisfy himself by a visit to the property. Although unacquainted with the details of mining, he is a man of common sense, and has given me permission to read this extract from his letter:—

"Sinclair is only in its infancy, and from what I see there I am satisfied the shaft sinking and other work is being carried on in a most economical and satisfactory manner. I certainly think the engine on the property was bought very cheaply. I strongly advise shareholders and intending shareholders to go and look over the property themselves. I am sure they will be pleased with their visit. I learn from practical men that we have a splendid property in Sinclair." I attach a great deal of importance to that letter, because I happen to know, from the very careful enquiries he has since made, that he intends to become much more largely interested. There are only two other points to which I would call attention. First, that we have smelting works within three miles of the mine, and we have splendid roads to within 50 yards of the main shaft. Secondly, a word with regard to the price of lead. This matter is causing a great deal of anxiety. We know that lead up to last Tuesday had been dropping. After Friday we had a rise of 10s. a ton; but we must not forget that the low prices that have been ruling during the past few years have been the means of introducing such economy and labour-saving appliances in the matter of dressing and preparation of ore for the market never before thought of; and in the starting a mine like the Sinclair we can so lay out our dressing-floors as to be able to meet the low price for lead. Therefore, I think, fortunately for us the position of the lead market has been low, and in our future arrangements we shall the more profit by any increase in the price of lead. But even presuming the lead market remains as it is is, from the high percentage of silver our ore assays, and the fact that we have the lodes already proved, and every facility for extracting a quantity of ore, I have really no hesitation in saying that those who have been lucky enough to secure shares in this undertaking will find every word stated in our carefully prepared prospectus prove correct, and that, notwithstanding the position of the lead market, we shall look forward to early dividends in the future. When the accounts are laid before you, you will find that the preliminary expenses will be practically *nil*. The company has not paid one farthing for commission on shares. The expenses attending the formation have not fallen upon the company, so that the money that has been subscribed, and that is being subscribed, will be employed in the strict development of what I am sure, as far as human judgment can foresee, will prove one of the best and most productive lead mines in that part of Wales. (Cheers.)

The CHAIRMAN: I have listened with very great interest to all that Mr. Bartlett has said. (Hear, hear.) The only business before us is the re-election of the directors.

Mr. EDWIN SMITH proposed, and Mr. HEYER seconded, the re-election of the directors *en bloc*.

On the motion of Mr. TOMS, seconded by Mr. EDWIN SMITH, the meeting was brought to a close with a cordial vote of thanks to the Chairman.

WHEAL GRENVILLE MINING COMPANY.

A general meeting of shareholders was held at Mr. Mitchell's offices, Union Court, Old Broad-street, on Tuesday,

Mr. R. W. GOOLD, in the chair.

The notice convening the meeting having been read, the minutes of the preceding meeting were read and confirmed. The accounts showing a cash balance of 2383*l.* 10s., and Capt. Hodge's report, were taken as read, having previously been circulated amongst the shareholders.

The CHAIRMAN said that when a mine is in its infancy, and the shareholders were spending money on it month after month, they were obliged to depend upon other people for information as to the progress which was being made with the property generally, and that had been the case in the instance of Wheal Grenville, where for years they met to do nothing else but make calls for the prosecution of the development of the mine; but the case alters when the ugly corner is turned and the mine is making considerable sums of money by way of profit. When that was the case the shareholders could form their own judgment of the state of their affairs if they believed that the accounts were honestly, truthfully, and carefully made up. He had often stated that Wheal Grenville would take its position amongst the foremost dividend-paying mines in the county, and though his brother committemen had not expressed themselves so freely, that they had held the same opinion might be inferred from the fact that they held amongst them one-third of the property. He was now more than ever convinced of the future of Wheal Grenville, for it had now taken its position amongst the foremost mines of the county. They had never had anything like sensational discoveries in the mine, but they had a huge lode carrying tin throughout its length and breadth. They had made steady progress, with nothing to unduly exult or unduly depress them. The rate of progress in the past quarter had been greater than at any time in the previous history of the mine. A great deal of what might be called extra work had been done and paid for in the quarter, and it might be hoped that in this respect there would be less to charge the accounts with in future. The last work accomplished was the erection of a crushing machine and engine, and the further extension of the dressing-floors; but of course the dressing-floors would have to be added to as the returns were increased. They would also have the expense of sinking the shaft. They were now down 190 fms., and he hoped that within six months they would be down to the 200 fm. level. The ends and stopes were about the same as when last reported on. During the twelve weeks they had sold 102 tons of tin, being at the rate of 34 tons a month, as compared with 32 tons per month in the preceding four months, and 24 tons in the previous three months. The amount realised had been 6926*l.* 2s. 8d., or an average of 67*l.* 11s. 5d. per ton, which, with 31*l.* 7s. received for old materials, and 1552*l.* 18s. 6d. brought into the account, made a total on that side of 8510*l.* 8s. 6d. On the other side, the dividend declared at the last meeting absorbed 1500*l.* The costs had been about the same as usual, the labour costs having amounted in the twelve weeks to 2621*l.* 0s. 5d., or at the rate of 25*l.* 1s. 2d. per ton, as against 24*l.* 13s. 10d. in the previous quarter. This increase was accounted for by the rise which had taken place in wages all over the country, and he for one was very glad that the condition of mining was such as to justify this increase. The merchants' bills amounted to 765*l.* 14s., or 7*l.* 9s. 4½*d.* per ton, as compared with 10*l.* 17s. 3d. per ton in the preceding quarter, the item of machinery having been much lighter in the past quarter. The coal bills amounted to 841*l.* 12s. 10d., being 8*l.* 4s. 2d. per ton of tin as against 8*l.* 6s. 7d. in the previous quarter. There were other smaller items of committee fees, secretary's salary, and so on, leaving a balance of 2383*l.* 2s. as the profit on the 12 weeks' working. (Cheers.) Out of that the committee were about to propose a dividend of 7s. 6d. per share. (Cheers.) In justification of that course he might remind them that they brought into the account 52*l.* 18s. 3d., and after payment of the dividend proposed they would carry forward a balance of 133*l.* 2s. (Hear, hear.) Twelve months ago they paid a dividend of 2s. 6d. per share for three months, or 10d. per share per month; then they paid 5s. per share for four months, or 1s. 3d. per share per month, while 7s. 6d. per share would be at the rate of 2s. 6d. per share per month, or 100 per cent. increase on the last dividend. (Cheers.) If he were to occupy their time at greater length he could not better show the position of the company than by that statement with regard to the figures before them, and he would, therefore, move the adoption of the agent's report and statement of accounts.——Mr. RAWLINGS (Messrs. Harvey and Co.) seconded the motion, which was carried unanimously and without any discussion.

On the motion of the CHAIRMAN, seconded by Mr. R. JOLLY, a dividend of 7s. 6d. per share was declared, payable forthwith to the shareholders whose names stood upon the register on that day.

A cordial vote of thanks having been passed to the Chairman and committee of management, the proceedings closed.

NEW QUEBRADA COMPANY.

The directors in their intermediate report just issued state that the quantity of ore produced during the 12 months shows a very favourable increase in comparison with former years, and has justified the forecast which the directors made in their last report. The copper contents of the export ore may be taken as averaging slightly over 11 per cent., and that of the regulus about 21 per cent., dry assay in each instance. Progress north from deep level has been retarded by the necessity for improved ventilation in this part of the mine, which has now been successfully effected, and the drivage of deep levels in a northward direction will be at once resumed. Meantime this part of the lode continues, in conjunction with the Santa Barbara workings, to contribute a very large proportion of the whole output of the mine. In the other parts of the lode there is no change of importance to report.

Holman's level is now approaching a very interesting point, approximately on the assumed line of intersection, and although the ground continues soft (which is unfavourable to the expectation that the lode is near at hand) the level has recently passed through a stratum in which nodules of iron pyrites were present, and the water issuing from the end contained traces of copper; thus indicating the existence of mineral, but whether near or not remains to be ascertained. The ground has been comparatively soft for nearly the whole distance driven, which has prevented the advantageous use of the boring machinery; but when hard ground is reached it is believed that much more rapid progress will be attained by its employment. The engine and necessary appliances have been some time erected ready for work, and every precaution has been taken for their protection.

From Titiara the board is at length able to report improved prospects of practical and early results. A certain number of men have been kept steadily employed upon exploratory work, and the result is that the lode has been intercepted under favourable conditions, and the export of ore from this mine for direct shipment will be commenced at once. The lode was about 60 ft. wide at the point of intersection, and levels have been extended upon it, but the former workers wrought Titiara so very extensively that the directors can scarcely expect the present operations to be clear of old workings for some little time to come. Nevertheless the directors feel confident that this mine will from the present time become an important factor in calculating the company's future mineral production, and there is little doubt that at the beginning the ore to be exported thence will average over 14 per cent. of copper dry. The railway company has agreed to make a siding at their own expense some 300 yards up the Titiara Valley, so as to facilitate the removal of ore from the Titiara Mine, and every effort is being made to open up this promising lode with a view to its steady development.

As to the smelting and reduction works, it is remarked that considering the nature of the ores to be reduced, and the many difficulties that have arisen and been surmounted, the directors cannot but regard the out-turn of regulus as satisfactory on the whole; especially when bearing in mind that the works were only partially established during the early months of the year. A gentleman has recently been engaged as head smelter, and is now on his way to the works. Under his management the board hopes this important branch of the company's business will keep pace with the progress which continues to be made in the development of the mines, under the skilful direction of Mr. Holman, the company's valued superintendent. The due and permanent maintenance of blast

to the furnaces has become a matter of so much importance to the company, and any failure of the present hydraulic engine would involve such serious consequences, that the board has determined to supply a second hydraulic engine, which is now ready for shipment.

The directors are satisfied that the smelting works can be developed into an important and profitable industy, the fruits of which will furnish a large contribution to the general revenue of the company. They have, therefore, decided to add two reverberatory furnaces to the smelting plant, and the materials for these have been ordered and some of them shipped. The directors continue to follow up the question of extraction of copper by the wet method with close interest and attention, and prior to his departure the new head smelter was afforded opportunities of acquainting himself with the most modern improvements in use in this country. It is hoped that he may eventually be able to recommend some inexpensive but effective means of utilising in this way some of the very large quantities of ore which can only be profitably treated by this means. As the shareholders will remember, the 20 years' agreement with the Bolivar Railway Company began to take effect on Jan. 1, 1881, and the year under review is thus the first during which it has been in operation. It is too early to form an accurate estimate of its financial effect, but your directors believe it will be found to have worked satisfactorily.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

The report of the directors, prepared for presentation at the meeting on Thursday next, states that the gross quantity of oro, regulus, and precipitate received from various mines during the year ended June 30, 1881, was at Port Adelaide 2948¾ tons, against 2515¼ tons in the preceding year, and at Newcastle 7712½ tons, against 6343¾ tons in the preceding year. The quantity of ore, regulus, and precipitate smelted at the Port Adelaide Smelting Works during the year ended June 30, 1881, was 1364 tons, against 2227⅞ tons in the preceding year, and smelted at the Newcastle Smelting Works during the same period 6451 tons, against 6430½ tons in the preceding year. The quantity of copper made at the Port Adelaide Smelting Works during the year ended June 30, 1881, was 280¼ tons, against 441½ tons in the preceding year, and the quantity of copper made at the Newcastle Smelting Works during the same period was 1102¼ tons against 1094¾ tons in the preceding year. The quantity of copper shipped from and sold in Australia during the year ending June 30 last was:—Copper shipped from South Australia, 273¼ tons, against 437⅞ tons; copper sold in South Australia, 7½ tons, against 9¼ tons; copper shipped from Newcastle, 353¼ tons, against 473¼ tons; copper delivered in Newcastle in return for ore, 754 tons, against 1039½ tons; copper sold in Newcastle, 13 cwts., against 13¼ cwts. in the preceding year. The supplies of ore show a decrease of 1147 tons in the year, as compared with the supplies of the previous year, the low price of copper having caused many of the mines to cease raising ore. The recent rise in price was, however, exerting its influence upon the quantities of ore raised, and increased supplies were expected.

As to the supplies from the far North, the Port Augusta Railway, which at date of the last annual report was open as far as Hawker, 65 miles from Port Augusta, was further opened on July 1 to Beltana, a distance of 144 miles from Port Augusta, and the completion of the whole line of 200 miles was expected in April, 1882. At Parachilna, 114 miles from Port Augusta, the railway had approached within 25 miles of the Blinman Mine, where active steps were in progress for dressing and sending to our smelting works a considerable quantity of ore. Operations had also been commenced at several other mines in the neighbourhood of the Blinman.

At the time of the last annual meeting, on Feb. 24, 1881, Burra copper was quoted at 63*l.* per ton. In March the price had fallen to 67*l.* per ton; in April, to 66*l.* per ton; in May, to 65*l.* per ton; and in June, to 64*l.* 10s. per ton, the lowest point touched. During July and August the price remained at 65*l.* to 65*l.* per ton; in October and November it improved to 70*l.* per ton, and in December it reached 73*l.* to 74*l.* per ton, it highest point. It is now quoted at 70*l.* per ton. The causes of the recovery were two: the improved statistics of copper, and the speculation chiefly in Chilian copper which has set in since October. Australian copper, which has not risen so rapidly as Chilian, has not experienced so great a relapse.

All the furnaces at Port Adelaide are in excellent order for commencing work on an extensive scale whenever required. Extensive alterations have been made in the furnaces at Newcastle to give increased efficiency. The culvert was increased by more than 100 ft. in length, and a chamber built leading into the stack, besides several other improvements in different parts of the works, such as extra walls and fences, extension of floors, shed for storing culvert stuff, sinking pits for tanks, &c.

On comparison with the two previous years it will be seen that the wharf at Port Adelaide has not been so profitable as last, though a trifle better than the year previous to that. The growth of shipping at Port Adelaide has, for a time, received a check through so many large steamers loading and unloading into lighters in the Gulf. The whole trade of the port has also suffered through deficient harvest and general depression, and until recently it was feared that there would be another failure of crops. It is now pretty well known that there will be a tolerably fair harvest, and the prospects of the colony have considerably brightened. The company's manager hoped for improvement, especially when it was generally known in London that our wharf has a uniform depth of 19 ft. at dead low water. The profit and loss account for the year shows a balance at the credit of 4752*l.* 7s. 8d., out of which the directors propose to declare a dividend of 1s. per share, free of income tax, and carry 10 per cent. to the reserve fund, which will then stand at 9133*l.* 16s. 9d.

[For remainder of Meetings see this day's Journal.]

FOREIGN MINES,

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Feb. 11: Produce for the month of January, 23,000 oits.; value, 8912*l.*; yield, 4·1 oits. per ton.

SIERRA BUTTES GOLD.—The result of the working for January was—Sierra Buttes Mine: Total receipts, $25,759; total working expenses, $18,476.—Plumas Eureka Mine: Total receipts (estimate), $33,000; total working expenses, $19,000. The developments in the level, 150 ft. below the Mohawk tunnel, have not been satisfactory, the vein so far as laid open, appearing narrow and broken. The shaft and engine winze are being rapidly sunk, so that another intermediate level, 300 ft. below the Mohawk tunnel, may be driven, and the value of the vein at that horizon ascertained.

TAMBRACHERRY.—The manager, in report received this week says: At the Charlotte Reef we are preparing to sink a shaft on the lode, but it is very slow work getting the timber fixed, as we are now at the water level, and the timbering will have to be strong and durable.—Chundah: Driving on the lode in 1874 clearing, and the stone is improving in appearance. We are also working at an outcrop near boundary.—Material: Some corrugated iron has been sent up, and the machinery and stores will be dispatched from Calicut after the Cootacovil are all up.

COOTACOVIL.—The manager, in report received this week, says: We are still driving on the lode north and south, and the reef at both ends looks better than it has yet done, and is full of free gold on being pounded and washed. The shaft commenced at the entrance of the top adit will cut the lode at a depth of about 90 ft., or 150 ft. below the outcrops in ridge.—Surface Work: The work on the water-course is getting on well, but the sight we are obliged to select for reduction works is full of large boulders, and the work of levelling and clearing the ground is very heavy, and will take some time. It is, however, being pushed on as fast as possible.—Material: This is arriving every day from Calicut, and I expect it will be all up by the end of the week; we shall then be ready for the Nicolian.

CHONTALES.—Jan. 5: The manager reports: Total quartz treated during the month of December, 490 tons, which produced 49 ozs. of gold, or an average of 2 dwts. per ton. The manager also cleaned up the accumulated amalgam on the plates and about the stamp floors, which produced 35 ozs. of gold. Total 84 ozs. of gold, valued at 220*l.* Mine cost for the month, 397*l.*; loss, 177*l.* The lodes in Consuelo and Estrella continue hard and poor.

ENGLISH-AUSTRALIAN GOLD.—Mr. Mark Pollard, Fryerstown, Jan. 3: 350-ft. Level: This drive has been extended south 7 ft. during past fortnight, with very little quartz; there are only two leaders of quartz about 15 in. thick each one, but I think we shall get more quartz, as there is a little showing, coming up from the bottom of the drive.—190 ft. Level: This drive going east is in very hard sandstone again, and bad ground for driving; we have more sandstone in this drive than I anticipated. I have not measured the ground driven in this end this fortnight.—140 ft. Level: This level has been extended north of cross-cut 9 ft. during the past fortnight, with stone from 3 to 4 ft. thick, and 12 ft. from east to west, some still dipping west; see a little gold, but very poor, stone very hard. This is all the driving that has been done for the fortnigth; have not discovered any fresh stone in the mine for the past fortnight. The stone at the back of 150 ft. level is very small, just now there are four leaders which would make 2 ft. 6 in. of stone altogether. I think we shall get more in the rise, as there is a little quartz showing. Rise up 8 ft. from back of stopes; quartz still going up. The stopes north and south of cross-drive are just the same for stone, also 210 ft. level; all the other stopes in your mine are very poor just now; 430 tons of stone have passed through the battery since we cleaned up. During the holidays we cleaned out the boiler, also had an overhaul of the pumping and battery. Engine machinery all in good working order and working well. Crushed from 11 A.M. Wednesday, 14th ult., until Saturday 31st, at 10 P.M., less 3½ days of 24 hours during holiday.

CALLAO BIS.—Mr. C. C. Downes, Jan. 6: The erection of the crushing mill has progressed well, and now that we are to a certain degree independent of weather, from the fact that the roofing in is now fully completed, I shall be able to make a great stride in this department during the present month. There is still, however, a considerable quantity of the mill machinery on the road, and I shall be ready for it before it can possibly arrive; but I am happy to say the whole of it is now in transit, the last of it having been dispatched from Bolivar on Dec. 31, 1881. This consignment cannot, I fear, reach me at the earliest before Feb. 15, as from the continuous and heavy rains the roads are almost impassible in places. The earthwork for the tramway from the Azules to the mill has also been pushed forward, but not as energetically as I could wish, bearing in view the keeping down of all expenses; I intend at first to utilise the track thus being formed for the carriage of quartz by donkeys. This operation will commence early next week, and thus a large dump heap of quartz will be raised in time for the starting of the crushing mill.

NORWAY COPPER.—A. F. Seccombe, Feb. 3: The engine-shaft is sinking with all possible speed; last 6 ft. worth 14*l.* per fathom; lode improving. Copper at present in western end only; a little deeper it will be all the length of the shaft. The 116 ft. level has been driven 18 ft. in a very productive lode, opening up good stoping ground, and now worth about 15*l.* per fathom. The 72 west is also improving, and will soon be in good pay ground.

RUBY AND DUNDERBERG CONSOLIDATED.—Report on mines for the week ended Jan. 22: Dunderberg: The drift from the bottom of No. 7 winze has been advanced 10 ft. in low grade ore and iron during the week. This place is not producing an ore of value at present. The west cross-cut from the 700 ft. still continues in very hard ground; progress this week, 6 ft.; total, 71 ft. from the 700. The ore in the upraise from the 2nd intermediate drift from No. 2 winze is very irregular, and varies in quantity and quality almost daily; at present it is about 18 in. wide, and is in very soft ground, which is a good indication. The 2nd intermediate north drift from the No. 2 winze, 55 ft. below the 600 ft., has been advanced 12 ft. during the week; total, 135 ft. from No. 2 winze. The present end is in very favourable looking ground for ore. The west cross-cut from the 600 is in favourable ground for drifting; progress this week, 14 ft.; total, 48 ft. The east cross-cut from the intermediate drift from the No. 6 winze has been advanced 8 ft. without any change to note; total, 40 ft. Have shipped 5 tons ore this week, and have 22 men and nine tributers at work.—Bullwhacker: There are two tributers at work prospecting: are not extracting any ore at present.

COLORADO UNITED.—Advices from the mine (Jan. 24) are as follows:—The 12th drift, east of Silver Ore shaft, is now in about 100 ft., with a good streak of mineral 4 in. thick. The 12th drift west is about 60 ft., carrying concentrating stuff. The stopes Nos. 1, 2, and 3 are continuing to turn out well this month. All tribute places are looking about the same as we have been reporting. The Oneida and Coin Mines working entirely under tribute, and doing well.

FLAGSTAFF.—M. Gundersen, Jan. 22: Everything is looking very favourable in and about the mine to-day. Work has progressed very well the past week. The rise on the 600 ft. level was driven upward 8½ ft. all the way through iron, most of it of a good quality; the iron is very hard, and has to be blasted out. It is of a different character from what was taken out of the 400 ft. level, being mixed through with seams of hard red clay, almost like red kiel, with occasional bunches of pyrites. The rise on the 500 ft. level is now up 39 ft., a gain for the week of 12½ ft. at the time of making our last report. The iron in this rise had pinched almost out, but it has opened out again, and at present the whole face is in iron, mixed with manganese, clay, &c. The cross-cut on the fourth level is in 8 ft.; indications are very good in this cross-cut. In the rise on this level we have struck a very large body of iron ore of fine quality. It is impossible for me to say what the extent of this body is, but there are thousands of tons of it. As I have no way to dispose of the ore at present I have discontinued work in this rise, and am running a cross-cut to explore the ground lying between the main level and the footwall. The cross-cut in the 100 ft. level is in a distance of 45 ft. at this point; the ground has become somewhat softer, being mixed with a kind of clay and sand. We are having some very cold weather, which is giving us a great deal of trouble to keep the water-pipes open and machinery in running order. In several places the thermometer has marked 20° below zero.

EUREKA (NEVADA) SILVER.—Report on mines for week ended Jan. 28: Bold Eagle: The drift from the old stopes 50 ft. above the 150 ft. level has been advanced 12 ft. in low grade ore and iron during the week. Stope A is now entirely cleared of the wash material, and work commenced in the end thereof, which is the lowest point where the ore has yet been found; at present there is about 6 in. of good ore in the bottom. No. 2 cross-cut from the north drift, 150 ft. level, will be continued about 50 ft. from the east, in order to prospect this part of the mine thoroughly. Williamsburg is producing about the usual amount of ore; there are about 12 tons on the dump ready for shipment.

ISABELLE (Gold and Silver).—Mr. Lewis Chalmers writes, Jan. 23: I wired you to-day as follows:—"Shipped to-day, bullion, $475; cement copper, $800. Ore at mill, $17,000; battery samples, $65; tailings, $9. Chlorination now 87 per cent. Will ship again Saturday. Can run only 5 tons daily till mill capacity increased. Solid ore body at mine 20 ft. thick.—Chalmers." And which I now confirm. It only remains for you now to increase the capacity of the mill here to 10 tons, so as to give us a clear daily profit, over mining, milling, and hauling, of $270 to $300 a day. My letter of 16th inst. has already explained to you why we have only 5 tons, and what more is required to give us 10 tons per day. I do not recommend doing anything more in the way of capacity to this mill, because it is good in every respect for the ore for which it was built; but when I have run 10 tons a day here for the remainder of the winter, and proved that from 10 tons you can have a daily profit of from $270 to $300, you may agree with me that a mill of your own should be erected, with a capacity of from 40 to 50 tons, either on Admiral Selwyn's or H., D., and S.'s plan, with hoisting works at the mine to furnish the requisite amount of ore to the mill.

Jan. 25: The recent fall of snow has somewhat impeded our teamsters hauling ore, but we have an abundance on hand to outlast the storm so long as we can run only 5 stamps—5 tons a-day. With two more agitators and a few more precipitating tanks I can double the capacity, but there is no room in the present mill building for more than two agitators. If there were I could stamp 18 tons per diem.

Foreman's Report: During the past week, ending Jan. 23, 10 ft. of water has been pumped out of the shaft. A drift has been struck, which was found full of water, and has taken some time to pump out. We found that the drift had caved in several places, and it took all the latter part of the week to clean out and timber, and we have not quite got to the back of it yet, but will probably by next week. A raise has been put 30 ft., and connected with the ore chamber to give ventilation. The ore body looks well, 30 ft. long by 20 ft. wide, and still growing longer; 30 tons of ore have been shipped to the mill during the week, and there is still a large quantity on hand. Ten men have been employed throughout the week.—SAMUEL ARGALL,

— J. O. Stewart, Jan. 25: Mill Report: Since my last report (Jan. 18) the mill has been running successfully, with however a few temporary interruptions of a few hours each. The battery samples of the ore are very uniform, of an average of $65 of gold, silver, and copper. The furnace work is now a success, although not yet of constant regularity in percentage, the chlorination having reached 90 per cent. The process and machinery works very uniformly to whatever percentage the furnace roasts the ore. The tailings have reached as low per ton as $5·65 gold and silver; the gold a trace. The fire was started in one of the calcining kilns last Friday, and is working very nicely; the other kiln is being charged with ore. On Jan. 23 we melted a bar of bullion, No. 4, 1022 ozs., 330 fine silver, value $433·43; 002 fine gold, value $42·20=$475·63. We have a retort of bullion out, but not yet melted; will melt again on Friday of this week. We have also got ready and shipped 75 sacks of cement copper, the gross weight, including sacks, moisture, and impurities, was 8337 lbs. There are now 18 sacks more dried and sacked, and are daily drying about 600 lbs. The whole work is now an established success, capacity alone being the requisite for a profitable business.

JAVALI.—G. E. Chambers: Extracts from manager's letter under date Jan. 5: I beg to had you the following account of the past month's working:—Mine: The No. 1 level over Pim's tunnel was driven 5½ varas; the ground here has become hard, but nothing compared with what we had underneath. As yet no good quartz has been struck, but I have great hopes that when we are in about 50 varas we shall be more successful. The shallow level for stoping between San Peduto and Laken shafts was driven 9½ varas; lode wide and rich. The shallow level for stoping on south lode under Socorro was driven 15½ varas; quartz of very fair quality. From the various stopes both on the surface and in the interior of the mine we extracted 738½ cubic varas, and from the various manto workings 403½ cubic varas. We have not yet finished clearing the fallen ground and other debris caused by the heavy rains of November. Concepcion I have left entirely for the summer months. The whole of December was wet, but not to cause us any damage. The stuff brought to the mill last month gave a slightly poorer average yield, which I attribute to our being prevented from working some of the best places on account of the fallen ground.—Mill and Remittance: The 30 stamps worked 21 12-24 days, crushing 2090 tons of quartz, which yielded 422½ ozs. of smelted gold, making an average of 4 dwts. 1 gr. per ton. The total remittance of gold, including the result of the Esperanza Mill, consists of 489 ozs. The Christmas holidays put us back somewhat, in addition to the falling off in the quality of the quartz; this month I expect to be in a position to bring better stuff down than hitherto, and if we have water sufficient to run the whole time with 30 stamps you may expect a better remittance by the February mail. I am overjoyed to inform you that the weather as yet gives every sign of continuing wet. On looking over our statistics for the whole of 1881, I cannot but feel very satisfied at the results of each months' working; during the 12 months I have sent you 6035¼ ozs. of gold, a total only equalled in 1878, and to this I have in my favour the very long dry season, which was perfectly unprecedented. Unless something unforeseen happens 1882 will be better, as I have prospects of fair quality quartz, and likewise shall have eight stamps at Esperanz instead of four.—Esperanza: At this mill we crushed 221 tons of quartz, which yielded 66½ ozs. of gold, making an average value of 6 dwts. per ton. The other four stamps are almost ready, and in a few days can be put to work should the shoes come. I have this time made the feed-box to discharge at three sides, which will give the stamps a great crushing power. No tailings were treated, as at the commencement of the month I had to disconnect for the erection of the stamps. I am now simply re-treating the sand from the square stamps in the settler, the same as done in our mill.—Receipts and Expenditure: The expenditure was 1038*l.* 8s. 5d.; the remittance is valued at 1200*l.*

BROADWAY GOLD.—J. W. Plummer, Jan. 23: The 75 ft. level has been advanced for the week 8 ft. 6 in.; full length 595 ft. 6 in.; the vein is 5½ ft. wide, and the ore is apparently of good grade. It has altered its course somewhat, and is bending south. The rise became inconvenient to work, and we commenced to sink from surface to meet it. We are making good progress, being down 22 ft. The stopes are looking as usual. We are now approaching the wide part of the vein between the 25 ft. level and the 75 ft. I do not think the grade of the ore is so good where the vein is wide and heavy as it is where it is compact and narrow. The ore broken and raised for the week is as follows:—On hand 16th inst., 1980 tons; broken for the week, 230 tons = 2210 tons; hauled to the old mill, 50 tons: total, 2160 tons.—Mutual Agreement Mine: The tunnel is advanced for the week 6 ft. The crevice is widening gradually, especially in the roof, and the ore is getting more abundant. We have doubled our force here, and will make better progress. In the neighbouring mine—the Ajax lying east of the Mutual—the owners have struck some high grade ore. It is, however, some distance away from us. They have worked up to within 50 ft. of our eastern end line. At this point in their workings the ore is plentiful, but of low grade as it is in the Mutual.—Old Mill: We lost 30 hours by the water pipes bursting that bring our water from the creek. They are rathher thin, and a recent cold "snap" burst them in several places; they are now repaired, and we are working all right.—New Mill: The new mill is almost complete. The contractors are short a carload of rails for the tramroad through oversight, but they are on the road, and we still hope they will be here in time to start about Feb. 1.

— J. W. Plummer, Jan. 26: The end of the 75 has developed quite a new feature. We have cut a breast-head quite vertical, showing a thin face of spar, and behind this is solid gneiss, and I am inclined to think that this is the footwall which up to this point has been very flat. In former letters I have told you that the vein has been swinging to the north very much. Lately it has shown a disposition to turn southwards again, and now this new development will still throw it south. The line of contact between the limestone and gneiss, as seen on the surface, is very crooked and zigzag. We are making good progress with our shaft, and the stopes are looking as usual. There are two more men on the Mutual Agreement Mine, and when they get into the ore body, we can still further increase our force, and show up the value of this mine rapidly.

DINGLEY DELL ESTATES AND GOLD.—J. Williams, Jan. 20: Your letter of Dec. 22 has arrived. Since my last communication we have got things ready for crushing, but, as you are aware, everything being new will take some time to get in steady working order. After clearing the plates we found that the chemicals had not been sent out to amalgamate them, but we were fortunate to borrow them from a neighbouring mine; they have all taken the mercury and looking capitally well. The mine has given us a considerable amount of trouble by means of the pans throwing over irregular splashes of water, the consequence is a loss of mercury has made some alteration in them, but now working more regular. Another matter always attending the starting of all new machinery is the stretching find slipping of the belts; these we have taken up several times, but after a few weeks working they will find their own bearing. The little we have crushed, which is not much, was sifted through a pair of sieves sent out complete by Messrs. Beverley and Atkins—a 12-hole; this we find a great deal too coarse, and have been obliged to change them for a 16 hole, so you will see all these things have thrown us back, but you can easily imagine that difficulties will attend us for some time, because the machinery is new to the whole of us, but I think with a little patience we shall improve the working of it considerably, and you may rely on it we shall do our best to make it do all that is possible. I was pleased to see mentioned in your letter about revolving stamps; this is a step in the right direction. This kind of machinery has been proved, and when once erected you may well calculate upon a certain amount of work being done. There is not much alteration at No. 3 reef; it is a very wide, strong lode, and to all appearances likely to last to any depth. We have been blasting up some of the bottom quartz to-day, and the indications give us every reason to expect an improvement as we go down. No. 4 is dipping to the east, and we shall follow it to ascertain if it will form the regular reef. We have about 30 tons of quartz got out here; in fact, we have quartz enough for a deal more powerful machinery. The men and myself are all very well, and have not had a day's sickness.

SOUTH-EAST WYNAAD ESTATES AND GOLD MINING.—Mr. Cooper, mine manager, Jan. 21: New 20-stamp Battery: I have decided to have the new mill site on the side of the hill just above the stream on the Richmond estate. It is a first-rate site, and not far to pump the water up. Eventually our workings will extend towards that place by the strike and dip of our lode in No. 5 tunnel. I shall commence the levelling next week, and then make the necessary excavation for the foundations. I shall get the foundations made before building the house. I am preparing plans of all the workings, also the proposed new mill site, tramroads, &c., to bring with me. Penn, the photographer, is now in the Wynaad, and I will have photographs of works taken both here and at Perseverance.—Leaving: The Messageries steamer leaves Madras on March 7, but it is doubtful if there are any vacant berths; if not I shall try Rubitius.—Twelve Stamp-head Battery: The erection of this is progressing very favourably, and it is generally said that if it is not one of the latest improvements there is not one in the Wynaad better constructed; I mean the building, framework, and work done here. Everything is very substantial and strong. The greatest hindrance to us will be the reservoir; having met with rock progress is slow on it. Maddas does not like rock, but I hope to get it finished in a month from this. By a selegram dated Feb. 13 he states engine, stonebreaker, battery erected, reservoir completed. The directors, therefore, think Mr. Cooper may be in a position to begin bulk crushing the first week in March, and are glad to see he is making arrangements for his short visit to England as early as possible next month.

ALAMILLOS.—Feb. 1: The lode in the 20 driving east of Santa Aqueda's shaft is rather small, producing ½ ton per fathom. The 60 driving east of San Felipe's shaft is opening up very good ore ground, at 1½ ton per fathom. In the 40 driving west of San Felipe's shaft the ground is very hard and the lode unproductive. The lode in the 40 driving east of Eusebio's winze is small, being valued at ½ ton per fathom, and the granite hard. In the 130 driving east of Taylor's engine-shaft there is a large and open lode with good stones of ore. The lode in the same level driving west of Taylor's engine-shaft is strong with spots of ore, but not sufficient to attach a value to. In the 60 driving east of San Enrique's shaft a valuable piece of lode has been driven through in the past month. The end is poor at present. The lode in the 80 driving east of San Victor shaft is improving and yields good stones of ore, worth ½ ton per fathom. In the 50 driving east of San Victor shaft, having ventilated this level by holing Albert's winze, the men are put to drive east; the lode is valued at 1 ton per fathom. The lode in the 80 driving west of San Victor shaft is small and without ore. We have taken up the driving of the 80 (middle lode) from west of San Victor shaft; the lode produces 1½ ton per fathom. In the 50 driving west of San Victor shaft there is an open and very promising lode, worth 1 ton per fathom. The lode in the 60 driving west of San Victor Shaft is small with good stones of ore, ground very hard. In the 70 driving in the same direction the lodge is small, irregular, and of no value. Albert's winze, sinking eblow the 40, is holed to the 50; lode worth 1 ton per fathom. In Diaz winze sinking below the 70 the lode (valued at ½ ton per fathom) is less productive. The men are making great progress in Perez's winze sinking below the 50, but the lode is poor at present. The usual quantity of ore was returned during the past month, and the stopes are now without any change of importance. The works at surface are going on very steadily, and the machinery is well kept. We estimate the raisings for February at 200 tons.

FORTUNA.—Feb. 1: Canada Incosa: The lode in the 120, driving west of O'Shea's engine-shaft, has decreased in value to ½ ton per fathom, and the ground is very hard for driving. In the 70, driving west of San Pedro's shaft, the lode has greatly improved, and now looks promising, producing 1 ton of ore per fathom. In the 80, driving west of San Pedro's shaft, there is a large strong lode, thickly spotted with lead ore; worth ½ ton per fathom. The 90, driving in the same direction, is laying open productive ground at 1 ton per fathom. The lode in the 90, driving east of San Pedro's shaft, is divided into two parts, each containing ore, but not enough to value. In the 120, driving east of O'Shea's engine-shaft, the lode is small, with spot of ore only, and the ground very hard. The lode in the 100, driving east of Lownde's shaft, is disordered by cross clay joint. In the 80, driving east of St. Tomas shaft, the lode is regular, composed of hard clay, quartz, and lead ore, but not to value. Isidora's winze is being sunk at a good rate below the 80, in a good productive lode; worth 1¼ ton per fathom. In Antero's winze, sinking below the 70, the ground is harder, and the lode consequently of less value, being only worth ¾ ton per fathom. In Martinez winze, sinking below the 90, the lode is compact and regular, and is valued at 1¼ ton per fathom; ground exceedingly hard.—Los Salidos Mine: The lode in the 175, driving west of Taylor's engine-shaft, is small and unproductive. In the 175, driving east of Taylor's engine-shaft, the lode has improved in value, and is yielding very good lumps of ore; worth 1 ton per fathom. The 160 is driving in the same direction through disordered and unproductive ground. The 145, driving east of Taylor's engine-shaft, is holed holed to Poveda's winze, and is now well ventilated. The lode in the 130, driving in the same direction, has slightly improved in value in the past few days to 1 ton per fathom. The 120, driving east of San Pablo's shaft, continues to lay open productive ground; worth 1½ ton per fathom. The lode in the 90, driving west of Palgrave's shaft, is very small and poor, and the ground harder. In Gaspar's winze, sinking below the 110, there is a compact and regular lode, producing ½ ton per fathom. Soto's winze, sinking below the 110, is laying open good stoping ground; worth 1½ ton per fathom.—San Anton Mine: The lode in the 45, driving east of Henty's engine-shaft, is compact, and continues to open up good stoping ground. In the 55, driving in the same direction, the lode has been somewhat disordered by a fissure. In the 55, driving west of Henty's engine-shaft, there is a large steam of water coming out of this end. We have not yet cut the lode. The lode in the 45, driving west of Henty's engine-shaft, is small, and does not contain sufficient ore to value. In the 30, driving west of Henty's engine-shaft, the lode is poor at present. Juan's winze, sinking below the 30, is holed to the 45, and both levels are now well ventilated. Castro's winze is being sunk below the 45 in a very rich lode, producing 3 tons per fm. San Francisco Mine: The lode in 40, driving east of engine-shaft, is very irregular. In the 40, driving west on the caunter lode, the lode is strong, but at present contains little ore. The lode in the 40, driving east, on the caunter lode, has been slightly disarranged by a cross-course. In San Francisco shaft sinking is being proceeded with rapidly below the 40, and the lode is more compact, producing 1 ton per fathom.

[For remainder of Foreign Mines see Journal.]

WASHING COAL.—Coal has heretofore in some cases been washed by causing it to pass, together with water, along an inclined trough provided with ledges upon the bottom. The ledges stop the heavier impurities (such as stone, shale, and pyrites), whilst the coal is carried on by the water. The operation is aided by the use of hand rakes keeping the coal in movement. According to the invention of Messrs. T. BELL, jun., and W. RAMSAY, of Tursdale Colliery, Durham, an arrangement is made which saves labour and economises water. They employ a trough of a semi-cylindrical form; it is mounted as heretofore in an inclined position, the coal is placed upon it at the higher end, and a stream of water is directed along it. They provide also an axis passing along the trough from end to end, and the axis carries arms or stirrers; it is caused to rotate, and keeps the contents of the trough in motion. There are also ledges within the trough to stop the heavier matters which descend to the bottom from passing onwards, but these ledges are not fixed to the trough, they are carried independently, as also is the axis. The arrangement is such also that when the trough contains a certain quantity of mineral impurities stopped back by the ledges it can be dropped away from or removed from the ledged and stirrers, and made to discharge the refuse into a suitable receptacle. For this purpose they fix the trough near its upper end to an axis, and near the other or lower end they suspend it by the aid of counterpoises, which admit of its being raised and lowered with but little expenditure of force. Apparatus thus arranged is applicable for washing other minerals or materials.

"MECHANICAL ENGINEERING."—The first number of the new monthly magazine bearing this title has been issued in London, and may be regardad as the English edition of Wiebe's Skizzenbuch, which has long enjoyed a high reputation in Germany. For those who are not acquainted with the original work it may be stated that "Mechanical Engineering" consists of a series of illustrated notices of machines by various manufacturers on the plan of the illustrated catalogue notices to which purchasers have become familiar in the volumes issued from time to time by individual engineering firms, and there can be no doubt that many of the smaller engineering firms will be glad to avail themselves of this form of advertising as being at once cheap and effective. The magazine is admirably printed upon excellent paper, yet from the fact of its being produced in Germany (although in the English language) at, it is said, one-third the cost at which it could be printed in London the publishers are enabled to give 12 pages of letter-press and four working drawings (three 24 in. by 15 in., and one half that size) in the monthly part. The woodcuts, which are exclusively by foreign artists, are of excellent quality, and clearly printed. The lithography of the working drawings is also creditable, and although the foreign origin of the descriptions is evident it is by no means objectionable; indeed, it forms an amusing variation from the language we are accustomed to, and will serve to impress the details on the memory. The issue of the work displays great enterprise, which is certainly entitled to appreciation.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. CLXLI.*

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2.—TAIL ROPE SYSTEM *(a)*—HAULING AND TAIL ROPE.—The following example is from Dowlais. The total length of the road is 1525 yards, and each train consists of 30 corves, carrying 1 ton each. The road forms the main adit, by which the corves are brought to the surface. The hauling engine has a pair of cylinders, 12 in. diameter by 24 in. stroke. The rope is 1 in. diameter. The winding drums are placed side by side, but one somewhat in advance of the other. The engine drives direct on to the shaft of one of the drums, the second is driven by spur gearing, two large wheels of equal size being used, the one on the engine shaft and the other on the second drum shaft. The speed of the corves is 8 ft. per second, so that a run is completed in 10 minutes; as the roadway is single 10 minutes are required for the return of the empty corves. Other 5 minutes are required for taking off the full corves and attaching the empty ones to it at the mouth of theadit, and a similar time at the starting place for attaching the full corves, and taking off the empty ones. Two runs, equivalent to 60 tons, are brought to the entrance of the adit per hour.

At the Sherburn Colliery, where this system is also used, the 35 corves, each containing 8 cwts., are drawn at a time. The average velocity is over 21 ft. per second, or 15 miles per hour. The hauling rope is ¾ in. diameter, and the tail rope ⅝ in. diameter. The latter has several connecting links corresponding in position on the rope, to the ends of branch roads coming into the main roads. The mode of employing the ropes in the main roads for hauling out of branch roads will be described later on. The engine, which is of 45-horse power, has the centre lines of the two cylinders placed at right angles to each other. The connecting rods of both cylinders are coupled on to the same crank. The hauling rope drum and the tail rope drum are both loose on the engine shaft, and are each controlled by a separate brake. A sliding clutch places the shaft in gear with one or other of the two drums.

(b) TWO HAULING AND ONE TAIL ROPE.—This arrangement is double acting. The two hauling ropes pass round two drums placed at one end of the road. This arrangement requires two roadways, on one of which the full corves are being hauled in one direction, and on the other the empty corves in the opposite direction. The tail rope is attached at one end to the last corf of the outgoing run, and at the other end to the first corf of the ingoing train, passing round a pulley fixed at the far end of the roadway. The drums must be placed loose on their axles, so that they can be separately geared with the engine, and each provided with a separate brake. This arrangement with two hauling ropes enables us to obtain double the number of runs in a given time than when only one hauling rope is used, provided of course that the next trains are being arranged whilst the last run is being made. This, however, necessitates three sets of rails at both stations, since the train of full corves on arriving at the end of the journey will meet the next train of empty corves on the same line, over which also the latter must return to the workings. Similarly the train of empty corves on its arriving at the end of the journey will find the same set of rails occupied with the next train of full corves. The centre set of rails at the station in the workings is used to range the trains of full corves, and they must be so disposed as to be alongside the train of empty corves when the hauling rope and the tail rope are disconnected from the latter. The centre set of rails at the station near the shaft are used for ranging the empty corves, which must be in such a position that the train of empty corves is alongside the train of full corves when the hauling rope and tail rope are disconnected from the latter.

The following, taken from Hetton Colliery, Durham, is an example of this system—2. *(b)* The rails are arranged for a single pair of rails (*i.e.*, one way) at the lower half, three single rails at the upper half, with a pass-bye (*i.e.*, two pairs of rails) at the centre. The roadway has a total length of 1400 yards, with a rise of two degrees. No points are required at the top end of the pass-bye, where the single rail branches into two. The arrangement at the lower end of the pass-bye for the full corves passing from the single line to the full road of the pass-bye, and for the empty corves passing from the pass-bye to the single road, consists in having two tongues hinged at the upper end, and connected near the opposite end by a cross iron bar, so that they must move simultaneously. The full corves coming on to the pass-bye open the points for the empty corves coming from the pass-bye. Check rails are provided at the points. The form of the guide or bearing pulley for the rope varies according to their position. They are placed at distances varying from 16 to 32 ft. Where the road is perfectly straight, and towards the upper end of the incline, the rope pullies are simply cylinders of wood with side flanges. Lower down the incline, where the rope shows a tendency to oscillate, the surface is curved doubly, so that the diameter is less in the centre of the roller than towards the sides. At the approaches into and from the pass-bye the pullies are placed in an inclined position, so that the pressure of the rope is always at right angles to the axis. In addition to these other other pullies, conical in form, are used, and the axis placed vertical, with the broad end of the pulley at the top. These serve not only to cause the rope to follow any desired curve in the road but tend to keep the rope down. The hauling engine of 36-horse power is placed sideways from the road near the top of the incline. The hauling ropes are passed downwards from the level of the roadway round guide pullies placed below the roadway in an excavation specially made. The ropes are bent at right angles round the guide pullies, and pass thence to the drum of the hauling engine. The guide pullies are placed in a timber frame, firmly secured to the brick foundation and the brick lining of the excavation. The excavation is covered in by stout planking, placed on cross beams. The longitudinal bearers fixed on these support the sleepers for the rails. The guide pullies are placed in an inclined position, their diameter is equal to the distance between the centre line of the roadways. As the inclination of (2) the roadway is too small to cause the empty corves to pull the rope out after them, the tail rope is attached with with one end to the last corf of the ascending run of full corves, and passing round a pulley at the bottom of the incline, has the other end attached to the first corf of the run of empty corves. Large rolleys, holding each three baskets of coal (1 ton), are used. Each run or train is composed of 8 rolleys, or 24 tons, in all per run. The drum of the hauling engine is 6 ft. diameter, and the gearing is 2 to 1. The engine makes 30 to 40 strokes per minute, so that 12 to 16 minute are required for each run, the speed of the rolleys varying from 5 to 7 ft. per seconds, or about 4 miles per hour. The above gives for a shift of eight hours 850 tons. Before the introduction of this mechanical haulage the horses only drew 3 tons each per journey, and made 10 journeys per day, or 30 tons. The engine thus replaces about 30 horses.

At the same colliery, on a similar roadway, 21 corves of 8½ cwts. each compose a run. The length of the roadway is 1900 yards, and the speed 10 ft. per second, or about 10 minutes per run. This will give about 40 runs per shift of 8 hours, or 360 tons per shift. The ropes used are about 1 in. diameter.

Von Hauer proposes the following arrangement, which requires only a single line of rails, excepting at the middle of the journey, where a pass-bye is required, and of course a double line of rails at the end stations. The guide pulleys for the hauling ropes and the tail rope are so arranged that above the pass-bye one of the hauling ropes keeps in the centre line of the railway, whilst the other passes outside, and clear of the rails; whilst below the pass-bye the latter hauling rope passes up the centre line of the railway. This hauling rope is of the same length as the length of the roadway, whilst the former is only half this length. The tail rope is of the full length of the roadway; the ends of the tail rope always traverse between the rails; that end attached to the train which is being hauled by the shorter hauling rope traverses only the portion of the road above the pass-bye, and the opposite end traverses only that portion of the road below the pass-bye. A portion of the tail rope is always carried clear of the railway. The full train from the workings and empty train from the landing place, with hauling ropes attached, and connected together by means of the tail rope are started and hauled to the pass-bye, where a halt is made, and the hauling rope and the end of the tail rope attached to the full run are disconnected and attached to the empty train, whilst those previously attached to the empty train are now attached to the full train. The motion of the two hauling drums is reversed, and the journey completed, the ropes coming back into their original positions, whilst the train of empty corves arrives in the workings, and the full corves at the landing place. This arrangements with a single road gives all the advantages of the double acting tail rope system, with the single disadvantage of the delay and labonr required in exchanging the ropes at the pass-bye.

Before proceeding to the consideration of the endless rope system we shall have consider those mechanical details peculiar to the two systems just described.

HAULING DRUMS.—In the system 1 *(a)* a single drum only is required, and in the systems 1 *(b)* and 2 *(a* and *b)* two drums are required. In every case they should be so arranged that they can be disconnected from the engine, and placed separately under the control of a brake. The connection may be effected in four ways. Either by means of sliding clutches, by friction clutches, or when gearing is used, the wheels may be slid out by moving one wheel parallel to the axis, or radially outwards. When the first method is used it is necessary to run the engine at a very slow speed, when the clutch is slid in or out. Moreover, this arrangement allows of the clutch being slid in only in those position when the jaws are opposite the notches. The number of positions in which the drum may be geared with the engine is much greater, when the spur gearing is employed, and in the case of friction clutches the number of positions is infinite. In order to prevent any twists of the drum, the most usual practice is to have one common long boss to both sides of the drum. The friction clutch arrangement has the advantage that the shock on throwing the drum into gear is not so great as by the other methods, and that in case of extra resistance the clutch may slip before causing a breakage of the rope or other parts of the engine. In the case of spur gearing it is best to arrange that the small wheel shall be moved on its axis, since in the case where the wheels are moved out of gear radially the drum shafts with drums, brakes to plummer blocks must all be moved together, which generally requires some screw arrangements. When the engine is placed sideways from the roadway, and even when placed in line with the roadway of the first guide pulley is near, the rope is liable to coil regularly on the drum. To avoid this it is very usual to provide a screw arrangement, carrying a couple of small guide pulleys, which traverse regularly to and fro in front of the drum.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. VON GRODDECK, Director of the Royal Bergakademie, Clausthal, the Harz North Germany.

FOREIGN MINING AND METALLURGY.

The imports of pig and castings into France last year amounted to 271,533 tons, as compared with 168,516 tons in 1880. The imports of iron minerals into France last year were 1,287,870 tons, as compared with 1,168,506 tons in 1880, and 941,811 tons in 1879. In these totals the imports from Spain figured for 419,097 tons, as compared with 332,207 tons in 1880, and 252,436 tons in 1879. The imports from Spain amounted last year to 348,488 tons, as compared with 279,286 tons in 1880, and 206,089 tons in 1879. The imports from Algeria amounted last year to 242,494 tons, as compared with 326,363 tons in 1880, and 289,506 tons in 1879. The exports of iron minerals from France in 1881 amounted to 88,292 tons, as compared with 114,796 tons in 1880, and 66,653 tons in 1879. As regards the current condition of the French iron trade it may be stated that the markets have not materially varied. Quotations have been maintained with tolerable firmness, while the demand has continued active. The Terre-Noire Company has contracted to supply the Paris, Lyons, and Mediterranean Company with 2000 tons of steel rails at 8*l.* 16s. per ton, while the Firminy Company has undertaken to deliver 13,000 tons to the Orleans Company at 9*l.* 4s. per ton. An Austrian Company has contracted to make 40 locomotives for the Eastern of France Railway Company. The price to be paid for these locomotives is 644*l.* per ton, which for 40-ton engines would amount to 2560*l.* per locomotive. Coal mining appears to be steadily extending in the Pas de Calais, the coal production of that important district having amounted last year to 5,320,616 tons, against 4,844,323 tons in 1880.

Belgian industrials are still fairly satisfied with the aspect of affairs, as some new orders for iron have come to hand; it is true that there is a slight check in business—what we may term a certain hesitation—but, at the same time, this feeling of uncertainty does not appear likely to last, and it is expected that the markets will regain their former activity, notwithstanding the recent financial disasters at Paris. It may be remembered that a similar check in affairs was experienced at the corresponding period of last year. Some descriptions of pig must be reported slightly lower, but the demand for iron has been a little more active. One of the principal producers of the Charleroi group has received some considerable orders this month. Girders have been maintained at 6*l.* per ton, and plates have been firm at 8*l.* per ton. Boiler plates have been quoted at 8*l.* 16s. per ton. The German iron trade still presents considerable activity in almost all its branches. The total production of pig in the Zollverein in December, 1881, was 258,826 tons, as compared with 203,677 tons in December, 1880. The large increase indicated in the production by these figures will not escape attention. Two Berlin companies have just taken orders at Breslau for 25 goods locomotives. Ten of these were taken at 1875*l.* per engine, and 15 at 1823*l.* per engine.

There is little news to communicate with respect to the Belgian coal trade, the situation being maintained upon nearly the same footing, and prices exhibiting little change. Cold weather a few days since stimulated the demand for household coal, but the temperature has since become milder, so that matters have relapsed into their former condition. Still some portion of the stock in hand has been absorbed, and the markets have experienced a proportionate relief. The season of 1881-2 is, however, too far advanced to admit of any improvement taking place; all that coalowners can do is to maintain present prices as long as possible, and to resign themselves to see prices fall in the summer as in other years. The Belgian iron trade is considered to have experienced a little check, and this circumstance will of course exert some influence on the coal trade. Coking coal has been in good demand; industrial coal has also been in considerable request. The tone of the German coal trade has not varied materially. Household qualities have displayed rather a downward tendency, but, on the other hand, industrial products have been in active request, metallurgical industry continuing to absorb large quantities. A considerable movement of coal has been noticed from the basin of the Ruhr, 14,558 trucks having been dispatched daily in the second fortnight in January. The corresponding movement in the corresponding period of 1881 did not exceed 12,740 trucks per day. Coke has been well maintained upon the German markets, the demand being active. The same may be said of coking coal, which maintains its price with much firmness.

BREAKING DOWN COAL.

For breaking down or getting coal or other minerals in mines and quarries, Messrs. SMITH and MOORE propose to use caustic lime, introduced into bore-holes in the said minerals, and then brought into contact in a confined condition with water, so that by the expansion of the lime in becoming slaked, and by the pressure of steam generated considerable force is produced, sufficient to effect the breaking down of the mineral. By this means, in the case of coal mines, the double advantage is gained of effecting the breaking down the coal without danger of explosion of fire-damp, and with the production of a greatly reduced proportion of small coal as compared with the ordinary blasting operation. Their invention may be carried into practice in a variety of ways, but according to the arrangement and mode of operating they employ, by preference, the caustic lime is ground fine, and then consolidated by pressure into cartridge form, each cartridge having a groove on the slide, which cartridges are enclosed in waterproof casings to protect them from damp. A solid rod or needle is first inserted into the bore-hole, the cartridges are then introduced, the surface of the groove being next to the needle, and they are rammed so as to insure their filling the bore-hole. After the cartridge or cartridges have been enclosed, either by tamping with clay or other suitable material, or by a bung or otherwise, the needle is withdrawn, and a tube is inserted in its place, which tube is fitted with a tap or automatic check valve, or other means of closing it. Through this tube the water is conveyed to the lime by a force-pump, or other power when the water has been so forced in, the pipe connecting the pump or other power with the said tube is detached, and the tube is closed so as to prevent the escape of the steam generated by the action of the water on the lime.

In order to cause the whole mass of the cartridge or cartridges to be subjected more or less simultaneously to the action of the water so as to bring about a rapid and energetic action the cartridge may have a groove, as before mentioned, formed along its side or a hole through its centre, into the front end of which groove or hole the said tube for conveying the water is made to enter, so that the water is forced in along the whole length of the cartridge or cartridges. Or the tube itself may be made to extend along the whole length of the cartridge or cartridges, and be provided with perforations or slits through which the water can issue. The lime they prefer to use is made from mountain limestone. Although they prefer to employ the lime in the form of consolidated cartridges, as described, yet it may also be rammed into the bore holes in an unprepared condition, the tube for conveying the water being first introduced into the bore hole at the side or centre thereof; or a solid rod or "needle" may be introduced in the first instance, as aforesaid, and after withdrawing the same the tube for the water supply is inserted in its place. If desired other fluids, such as diluted sulphuric acid, may be employed, or the water may be used hot to accelerate the expansive action of the lime, and other substances may be mixed with the lime for the same purpose.

BELL VEAN.—A large corrugated iron building is now being erected for the Bell Vean Tin and Copper Mining Company (Limited) at their works at Lanner, Cornwall, the outside dimensions being 130 ft. by 60 ft., and the roof supported by columns. The crushing rolls, machinery, pulsators, &c., will be placed at the east end, and beyond this are the engines, boiler-house, &c. The remaining portion of the floor-room will be used for the buddles and other washing and dressing purposes. To the south will be the counting-house, mine-captain's and manager's rooms; also workmen's dining and dressing-rooms, stores, joiner's, and blacksmith's shops, &c. The reducing machinery includes all the latest improvements, and this will be the first building of the kind erected in this part of the country. Mr. D. Burns, F.G.S., M.I.C.E., &c., of Carlisle and Silloth, is the engineer, and the works are being carried out under the personal superintendence of Mr. D. Mackenzie, C.E., &c., the company's resident manager, by Messrs. J. Leach and Co., contractors and engineers, of Manchester.—*Western Daily Mercury.*

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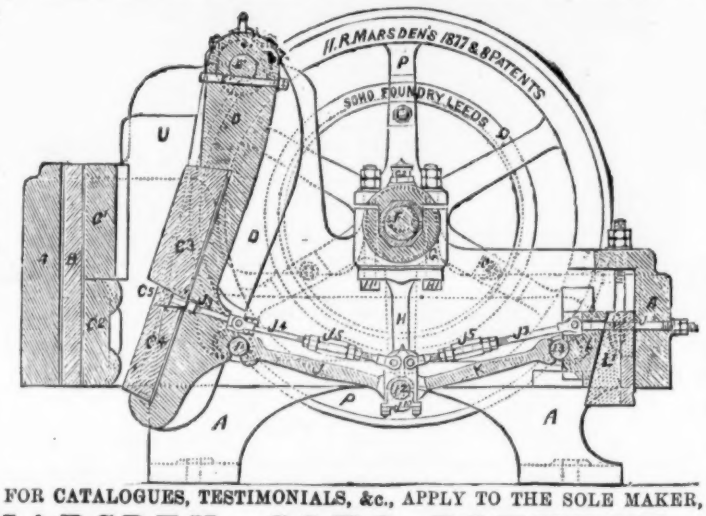

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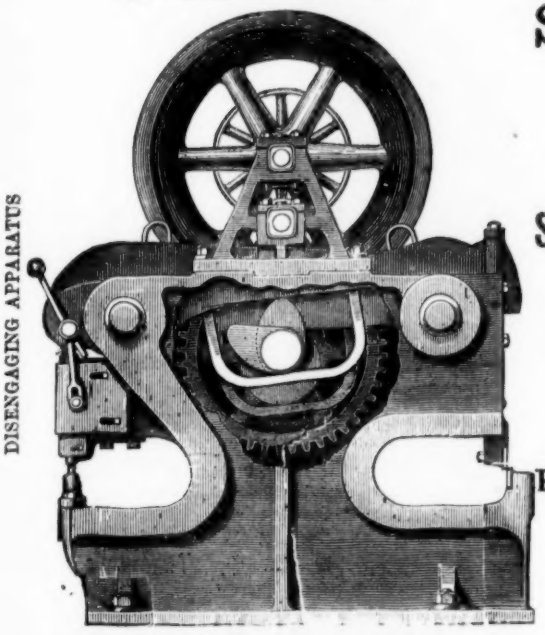

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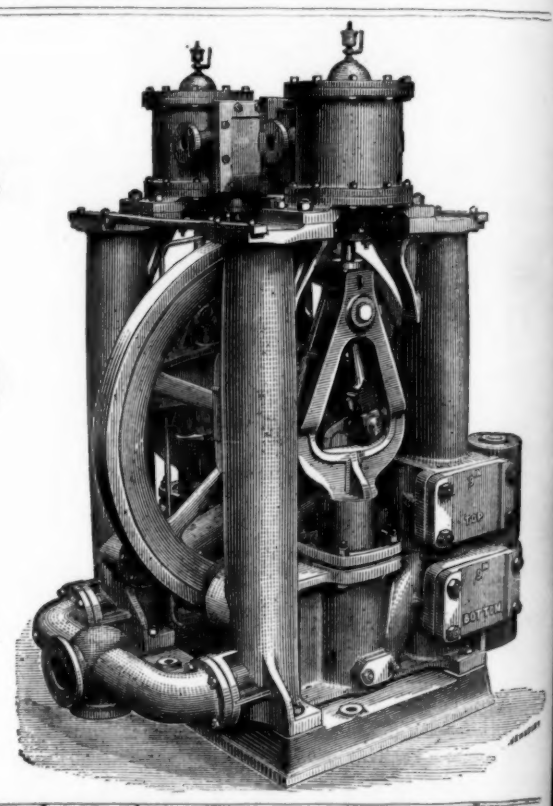

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